



MODEL	BELL 206	: REPORT NO.	206-0100-1SM
SERVICE MANUAL ADDENDUM TO			
ECS SYSTEM SERVICE & MAINTENANCE			

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APPROVED BY: *R. H. H.*

APR 27 2007
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REVISION L 04/27/07



Environmental Systems

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SERVICE MANUAL ADDENDUM

206-0100-1SM

FOR

BELL MODEL 206 ENVIRONMENTAL CONTROL SYSTEM

REVISION L 04/27/07

PREPARED BY:		 Keith Products, Inc. 4554 Claire Chennault Addison, TX 75001 Phone (972) 407-1234 Fax (972) 407-1571	PAGE NO. i	
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REV.	DATE	DESCRIPTION OF REVISION	BY	APPROVAL
A	3-6-84	Added title page & section G, revised pgs iii, iv, A-2, A-3, A-5, C-2, D-11, D-12, E-2, E-9, E-13, E-14, E-23, F-11, F-12, F-13, F-14, F-15, F-16, F-17, F-25, F-27, and F-36.	NS	NS
B	7-19-84	Eliminated Section "A", pg A-1 thru A-9, Revised pgs ii, iv, Restructured and Consolidated entire Addendum, Revised pgs A-2, B-2, C-7, C-10, C-11, C-12, C-13, D-2, D-4, D-6, D-7, Added D-7A, Revised D-8, D-9, D-11, D-12, D-13, D-22, E-2, E-3, E-4, E-5, E-7, E-18, E-19, E-20, E-23, E-25, F-3.	DD	NS
C	1/8/85	ADDED HEATER WARN CIRCUIT PAGE E-4a	REH	REH
D	6/25/85	Revised Pages: C-2, E-3, E-10, E-11, E-15, E-20, E-22, E-23, E-24, E-27, E-28. Pages Added: E-15A, E-15B, E-24A, E-24B, E-24C, E-24D, E-28A, E-28B, E-28C, E-28D, E-30, E-31.	REH	REH
E	8/8/85	Revised pages E-3A, E-4 and E-29 for Flex Duct P/N changes.	REH	REH
F	2-7-86	Revised Page: E-2 to add proper spare parts for blower assy. Revised pages: E24, E24B, E24D, E26, E28, E28D. ES02126-2 was ES02126-1. Revised pages E15 & E15B; ES20033-34 was ES20033-32.	REH	REH
G	10-17-86	Reformatted Manual for double sided printing and UPDATED Heater Service Procedures & available Service Bulletins.	REH	REH
H	11/10/92	Revised to include Model 206 L-4; revised to show inactive drawings; minor cleanups. Revised Pages: ii, C-2, C-3, C-5, D-5, D-6, E-3A, D-8, D-11, D-12, D-23, E-2, E-4, E-5, E-6, E-9, E-8, E-11, E-12, E-13, E-14, E-15, E-15A, E-15B, E-16, E-17, E-19, E-25, E-21, E-22, E-24C, E-24D, E-26, E-28B, E-28D, E-29, F-2 Added Pages: D-6A, D-6B, D-6C, D-6D, D-6E, D-8A, E-15C, E-15D, C-13A	KS	M.J.
		<p align="center"><u>NOTICE</u></p> Report title page and revision page are not to be distributed with this manual.		

REVISIONS CONTINUED

REV	DATE	DESCRIPTION OF REVISIONS	BY	APPROVAL
J	03/09/05	Updated Keith Products address on all corresponding pages; Added JBS2020-8 which supersedes JBS596-3 and JBS2020-1 on pages C-5A, E-9, E-11, E-12, E-13, E-14, E-15, E-15A, E-15B, E-15C and E-15D; Added SB196 to page F-1; Incorporated ECN3966. Reason: Service Difficulty per ER2406.	LEO	MAK
K	06/17/05	Removed note indicating 2000 TBO for compressor on page B1. Updated last page <u>was</u> Keith Products, Inc., <u>now</u> Keith Products, L.P. Reason: Customer Request per ER2814	BLW	MAK
L	4/27/07	Updated Title Pages <u>WAS</u> Keith Products, L.P. <u>NOW</u> Keith Products, Inc. Updated Zip Code on Title Pages and Description of Revision <u>WAS</u> 75248 <u>NOW</u> 75001. Edited I/N 1 on Pg. E-31 <u>WAS</u> JBS276-1 <u>NOW</u> ES61062-2. Reason: Product Improvement per ER3498	AJ	<i>MAK</i>

APR 27 2007
RELEASE DATE

BELL MODEL 206 ADDENDUM
TO
AIR CONDITIONER SERVICE AND MAINTENANCE MANUAL

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INTRODUCTION

This manual is intended to serve as a supplement to the general Keith Products Vapor Cycle Service Manual.

The general manual presents general service and maintenance information for a Freon air conditioning system.

This supplement presents specific service and maintenance data related to the Keith Products air conditioning system installation in the Bell Model 206 series helicopter. Since the Keith Products system is a total environmental control system (Heating & Cooling), this manual also provides service information for the cabin heating system.

A review of the basic manual prior to use of this document is recommended.

Questions and/or suggestions regarding this manual may be made by contacting Keith Products L.P. at (972) 407-1234, or in writing to Keith Products L.P., 4554 Claire Chennault, Addison, Texas 75001.

A. PERFORMANCE DATA

PERFORMANCE DATA

EVAPORATOR INLET AIR TEMP.(°F)	RELATIVE HUMIDITY(%)	COMPRESSOR SUCTION PRESS.(PSIG)	COMPRESSOR DISCHARGE PRESS.(PSIG)
95	0	10 - 20	185 - 215
	40	12 - 22	210 - 240
100	0	12 - 24	195 - 225
	25	15 - 25	200 - 230
	35	14 - 24	210 - 240
	65	22 - 36	230 - 260
	70	25 - 38	240 - 270
105	70	28 - 44	275 - 305

The cooling performance of the air conditioner changes considerably with changes in surrounding conditions. Testing must be performed using the correct method. This test is used to judge whether the system is operating correctly and can also be used as a guide in checking for problems.

1. Park aircraft in an open area.
2. Remove any access panels to air conditioner components.
3. Connect manifold gauge to high- and low-side service valves of the system. Refer to Handling Manifold Gauge.
4. Measure relative humidity of cabin air.
5. Start the engine.
6. Set the air conditioner switch to AIR COND position.
7. Set temperature lever to maximum cold position.
8. Set the fan to its highest speed.
9. After the air conditioner has been operated for about 10 minutes, record system pressures at high-pressure (discharge) side and low-pressure (suction) side. If the observed readings are within the limits shown, the system is functioning properly.

The pressure will change in the following manner with changes in conditions:

- When evaporator blower speed is low, discharge pressure will drop.
- When the relative humidity of evap intake air is low, discharge pressure will drop.

The temperature will change in the following manner with changes in conditions:

- When the ambient air temperature is low, the outlet air temperature will become low.

If the test reveals that there is any abnormality in system pressure, isolate the cause and repair. Refer to Trouble Diagnoses and Corrections.

INSPECTION AND OVERHAUL REQUIREMENTS

TBO SCHEDULE

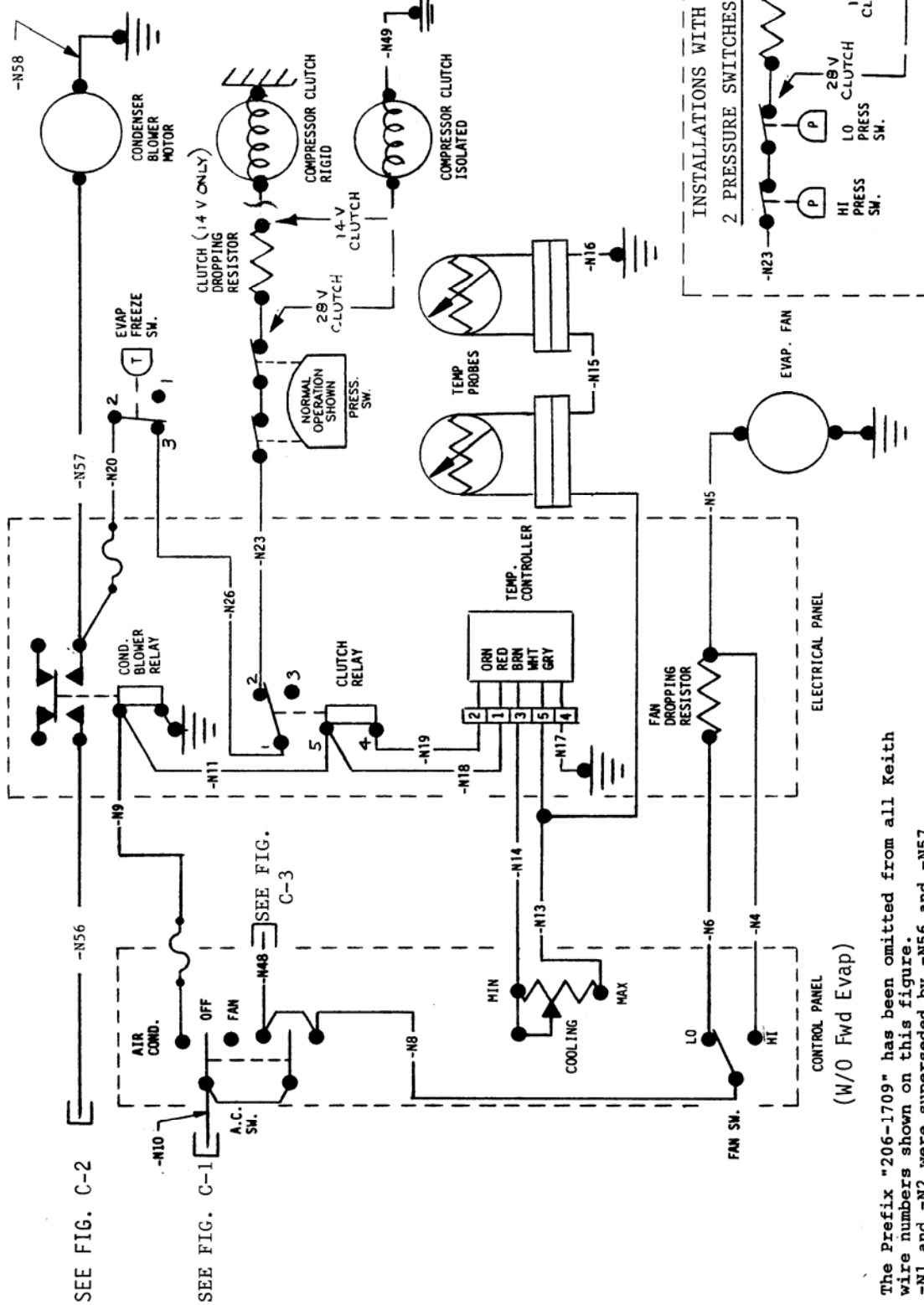
Time between overhaul (TBO) and mean time before failure (MTBF) for major components are as follows:

<u>ITEM</u>	<u>TBO</u>	<u>MTBF</u>
ES73103 Evap. Blower	1000 hrs.	1200 hrs.
ES73127-2 Cond. Fan	1000 hrs.	1200 hrs.
Compressor		2500 hrs.
V-Belt		500 hrs.

C. ELECTRICAL SYSTEM TROUBLE SHOOTING AND DIAGNOSES (Cont'd)

C-2

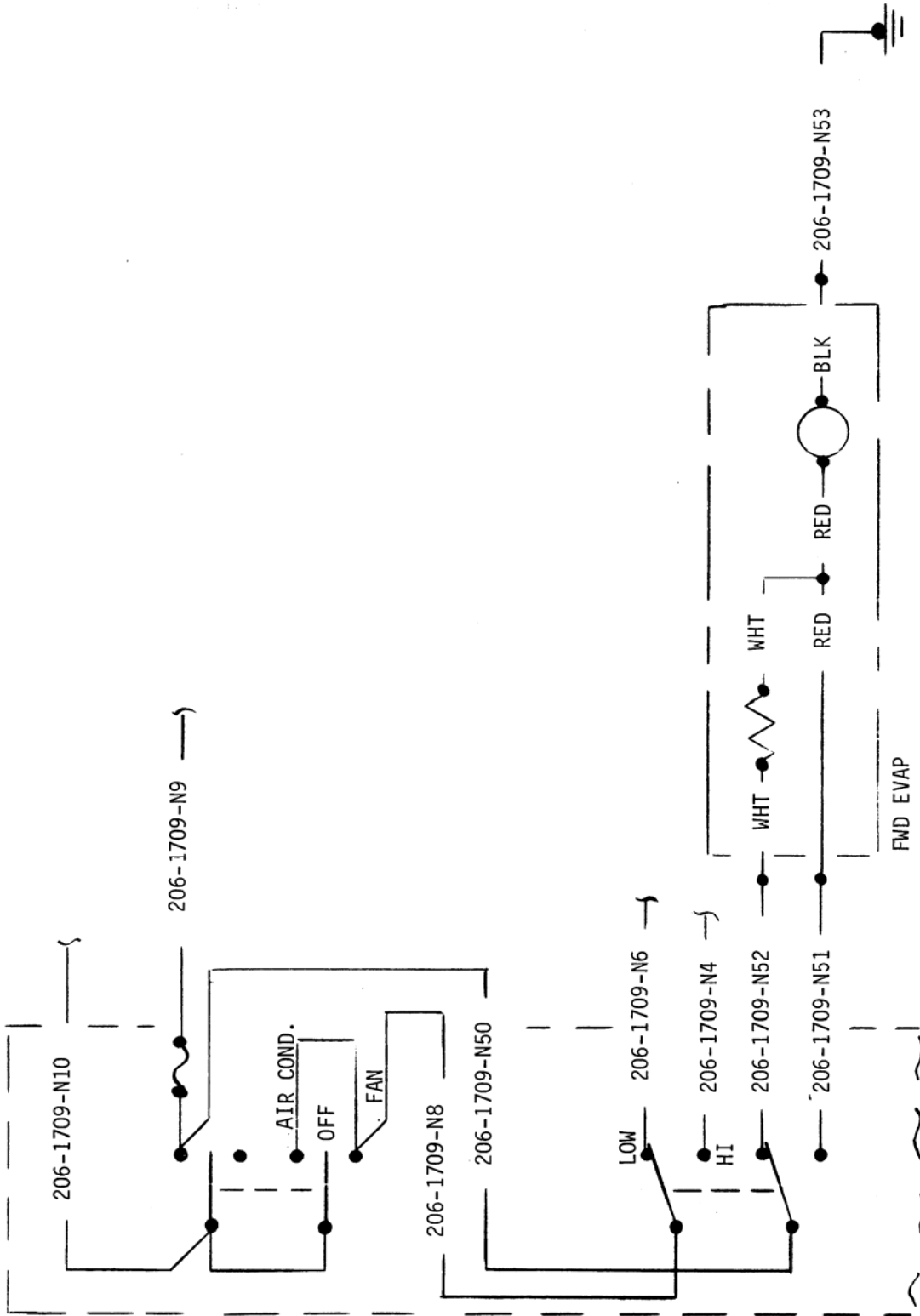
ELECTRICAL SCHEMATICS (cont'd)



NOTE: 1. The Prefix "206-1709" has been omitted from all Keith wire numbers shown on this figure.
 2. -N1 and -N2 were superseded by -N56 and -N57 respectively.
 3. Separate high pressure and low pressure switches were replaced by a single switch.

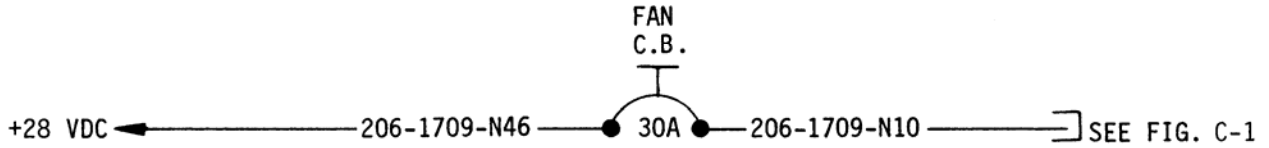
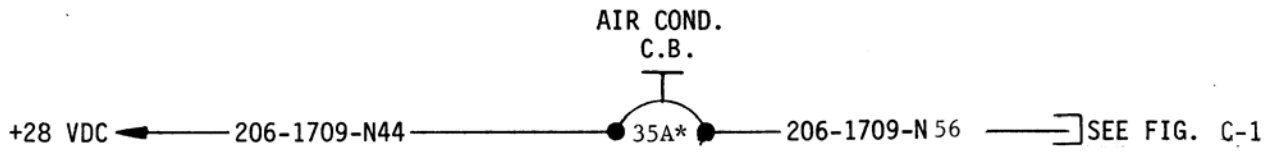
COMMON CIRCUITRY, FIGURE C - 1

C. ELECTRICAL SYSTEM TROUBLE SHOOTING AND DIAGNOSES
ELECTRICAL SCHEMATIC (Cont'd)

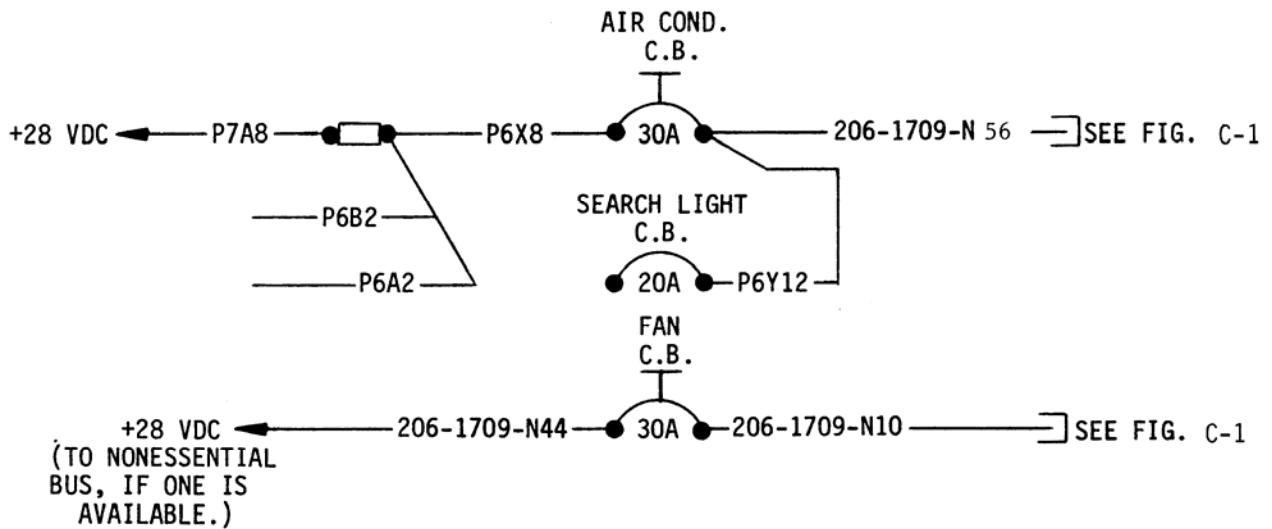


FORWARD EVAP BLOWER SCHEMATIC

C. ELECTRICAL SYSTEM TROUBLE SHOOTING AND DIAGNOSES (Cont'd)
 ELECTRICAL SCHEMATICS (Cont'd)



ALL BELL 206 MODELS EXCEPT TH-57



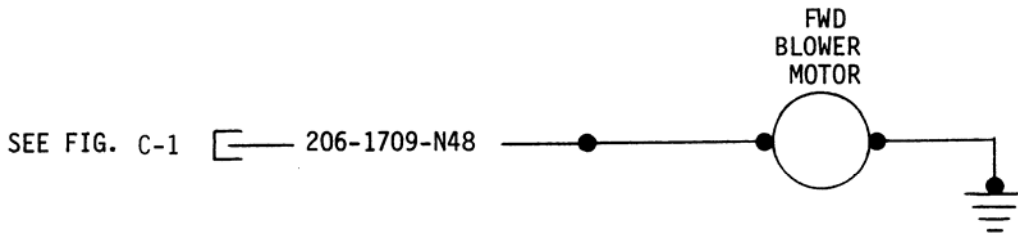
TH-57 ONLY

*EARLIER INSTL'S USED JBS75-8 30A CIRCUIT BREAKER.

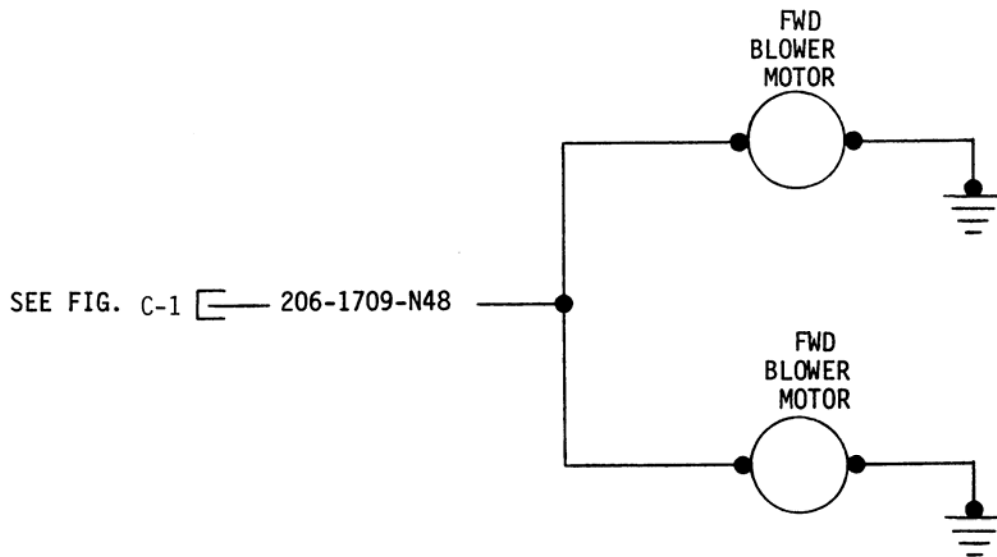
POWER DISTRIBUTION, FIGURE C-2

C-4

C. ELECTRICAL SYSTEM TROUBLE SHOOTING AND DIAGNOSES (Cont'd)
ELECTRICAL SCHEMATICS



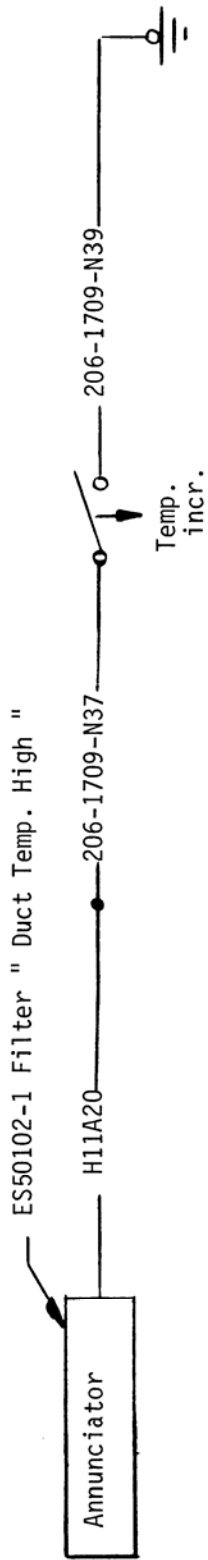
ALL BELL 206 MODELS WITH FORWARD BLOWER
EXCEPT TH-57



TH-57 WITH DUAL FORWARD BLOWERS

FORWARD BLOWER(S), FIGURE C-3

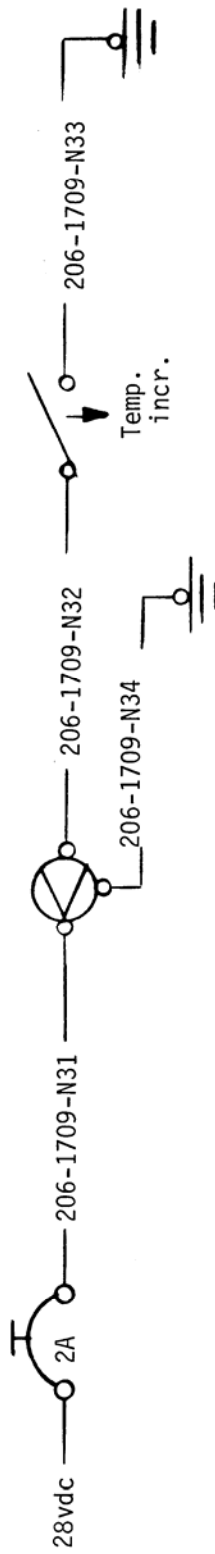
C. ELECTRICAL SYSTEM TROUBLE SHOOTING AND DIAGNOSIS (Cont'd)
ELECTRICAL SCHEMATICS (Cont'd)



Schematic for Ground Seeking Annunciator Location



Schematic for Positive Seeking Annunciator Location



Schematic for Aircraft With Out Annunciator Panel
HEATER WARNING SCHEMATICS, FIGURE C-4

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

COOLING PROBLEMS (cont'd)

SYMPTOMS

SYMPTOMS	COMPONENT	FAILURE MODE	ADDITIONAL TESTS	
No Cooling and: 1. Clutch does not engage, and 2. Condenser Blower Motor does not operate.	"AIR COND." CIRCUIT BREAKER	<u>OPEN</u>		
	AIR COND. SWITCH	"AIR COND." pole <u>OPEN</u>		
No Cooling and: 1. Cooling Control Rheostat set on "MAX"	FUSE ON "A.C." SWITCH	<u>OPEN</u>		
	COOLING RHEOSTAT	<u>OPEN</u>		
No Cooling and: 1. Cooling Control Rheostat set on "MAX"	Evap. Temp. Probe(s)	<u>OPEN</u>	Total resistance should be: 8670 ohms @ 60°F, 4952 ohms @ 80°F.	
	TEMP. CONTROLLER	<u>SHORT (#2 PIN)</u>	See Temp. Controller check procedure.	
No Cooling and: 1. Clutch does not engage	Clutch Relay	<u>OPEN (Output)</u>		
	Evap. Freeze Switch	<u>OPEN (or out of adjustment)</u>	Should close at 36° F.	
	High-Pressure Switch	<u>OPEN</u>	Should be closed at P 350 psig at compressor discharge	
	Low-Pressure Switch	<u>OPEN</u>	Should be closed at P 32 psig at comp. discharge	
	Press. Switch - High Limit	<u>OPEN</u>	Should be closed at 305 ± 30 psig at compressor discharge	
	Press. Switch - Low Limit	<u>OPEN</u>	Should be closed at 22 ± 7 psig at compressor discharge	
	Press. Switch Open	<u>OPEN</u>	Should be closed between 40 and 325 +35, -25 psig.	

Shooting arcs in Svc
usual

NOTE: 1. JBS919-1 (ES57008-2 & -4) PRESSURE SWITCH ASSY. (JBS2020-1 is used as spares replacement).
2. JBS2020-1 PRESSURE SWITCH ASSY. (replaces JBS919-1 for spares and new installations)
3. JBS2020-8 Pressure Switch Assy. (Replaces JBS2020-1 for spares and new installations).

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

COOLING PROBLEMS (cont'd)

SYMPTOMS

SYMPTOMS	COMPONENT	FAILURE MODE	ADDITIONAL TESTS
No Cooling and: 1. "AIR COND" CIRCUIT BREAKER OPENS	Condenser Blower Motor	<u>SHORT</u>	
No Cooling and: 1. No Airflow, and 2. No Motors OPERATING, and 3. Clutch disengaged	"FAN" circuit BREAKER	<u>OPEN</u>	
No Cooling and: 1. Clutch does not engage, and 2. Clutch fuse is blown.	CLUTCH COIL	<u>SHORT</u>	
No Cooling and: 1. No airflow, and 2. "FAN" CIRCUIT BREAKER OPENS	CLUTCH RESISTOR	<u>SHORT</u>	
No Cooling and: 1. No airflow, and 2. FAN SWITCH ON "HI", AND 3. A.C. switch on "ON" or "FAN", and 4. "FAN" circuit breaker opens	FORWARD BLOWERS	<u>SHORT</u>	
No Cooling and: 1. No airflow from evap fan.	EVAPORATOR FAN MOTOR	<u>SHORT</u>	
No Cooling and: 1. Fuse on "AIR COND." pole of A.C. switch is blown.	EVAPORATOR FAN MOTOR	<u>OPEN</u>	
	Condenser Blower Motor Relay	<u>SHORT</u>	
	Clutch Relay	<u>SHORT</u>	

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

COOLING PROBLEMS

SYMPTOMS

SYMPTOMS	COMPONENT	FAILURE MODE	ADDITIONAL TESTS
Reduced Cooling and: 1. Condenser Blower Motor does not operate.	Condenser Blower Relay Condenser Blower Motor	OPEN (input) OPEN (output) OPEN	
Reduced Cooling and Air Flow: 1. System operational	Freeze Switch	Setting	Sec "Freeze Switch" Setting Note (Pg C-11)
Excessive Cooling and: 1. Cooling Control Rheostat inoperative	Cooling Rheostat Evap. Temp. Probe(s)	SHORT SHORT	
Unwanted Cooling and: 1. Air Cond. switch on "OFF" or "FAN"	Temp. Controller Clutch Relay Air Cond. Switch	OPEN(#2 PIN) OPEN (input) SHORT (output) SHORT ("AIR COND" POLE)	See "Temp Controller" Check Procedure

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

AIRFLOW PROBLEMS (cont'd)

SYMPTOMS	COMPONENT	FAILURE MODE
No Airflow and: 1. No cooling, and 2. Evap. Fan inoperative, and 3. Forward Blower(s) inoperative	Air Condition Switch	<u>"FAN" POLE OPEN</u>
No Airflow and: 1. No cooling, and 2. "FAN" Circuit Breaker open	Forward Blower(s)	<u>SHORT</u>
No Airflow and: 1. No cooling, and 2. "FAN" circuit Breaker open, and 3. Fan switch on "HI" setting	Evap. Fan Motor	<u>SHORT</u>
No Airflow from Evap Fan and: 1. Reduced cooling	Evap. Fan Motor	<u>OPEN</u>
No Airflow and: 1. No cooling, and 2. No motors or clutch operating	"FAN" circuit Breaker	<u>OPEN</u>
No Airflow on "LO" Fan Switch setting.	Fan Switch	<u>OPEN ("LO" POLE)</u>
No Airflow on "HI" Fan Switch setting.	Fan Switch	<u>OPEN ("HI" POLE)</u>
No Airflow on "LO" Fan Setting (except from forward blower(s))	Fan Dropping Resistor	<u>OPEN</u>

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

AIRFLOW PROBLEMS

SYMPTOMS

SYMPTOMS	COMPONENT	FAILURE MODE
Reduced Airflow and, 1. Forward Blower(s) does (do) not operate	Forward Blower(s)	<u>OPEN</u>
Excessive Airflow on "LO" Fan Setting	Fan Switch	SHORT ("HI" POLE)
	Fan Dropping Resistor	<u>SHORT</u>
Unwanted Airflow from Evap Fan and Forward Blower(s) and: 1. Air Cond. Switch in on "OFF"	Air Cond. Switch	SHORT ("FAN" POLE)
Condenser Blower motor Operates and: 1. Clutch is engaged, and 2. Air Cond. Switch is on "OFF" or "FAN"	Condenser Blower Motor Relay	<u>SHORT (output)</u>

OTHER PROBLEMS (cont'd)

Temperature Controller Check Procedure

- Note 1: The following procedure allows the checking of the operation of the temperature controller while leaving it installed and wired in the aircraft.
- Note 2: Before performing the check of the temperature controller, perform an ohm meter check of the cooling control rheostat mounted on the ECS control panel and of the temperature probes located in the evaporator air inlet lip. The following chart gives the correct resistance values for the conditions shown. The temperature probes are wired in series and the resistance reading is made across both.

COMPONENT	CONDITION	RESISTANCE (OHMS)
RHEOSTAT	"MIN" SETTING	1500
	"MAX" SETTING	0
TEMP. PROBES	60°F Evap. Inlet Air	8670
	80°F Evap. Inlet Air	4952

- Note 3: To check the trip point temperature of the controller, the temperature of the air entering the evaporator must be between 60°F and 70°F.

Check Procedure

1. Attach the voltmeter (+) lead to either end terminal of the 206-1709-N19 wire and the ground lead to aircraft structure.
2. Place a thermometer in the evaporator air inlet.
3. Set the fan switch on "LO" and the air conditioner switch on "AIR COND".
4. Rotate the cooling control from "MIN" to "MAX". The voltage reading should jump from zero to battery voltage during the rotation.
5. Rotate the control fan from "MAX" to "MIN" and the voltage should drop from battery voltage back to zero.
6. The position of the rheostat know at which the voltage jumps will vary with the evaporator inlet air temperature. See the following chart for trip points.

AIR TEMP.	RHEOSTAT SETTING
70°F	"MIN"
60°F	"MAX"

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

OTHER PROBLEMS (cont'd)

Freeze Switch Specifications

- Switch: 1. Snap-acting S.P.D.T.
 2. # 2 Terminal is common.
 3. # 3 Terminal makes on temperature rise.
 4. # 1 Terminal breaks on temperature rise.

Dial Range: 1. Coldest OUT to warmest in 12°F to 60°F temperature settings:

DIAL POSITION	TERMINAL # 2 COMMON			
	TERM 2-1 BREAK AT	TERM 2-1 MAKE AT	TERM 2-3 BREAK AT	TERM 2-3 MAKE AT
COLD	20°F	12°F	12°F	20°F
NORMAL	38°F	30°F	30°F	38°F
WARM	56°F	48°F	48°F	56°F

Note: The factory has determined that the normal setting for this application is to align the scribe line on the cam with the scribe line on the case. However, under certain extreme climatic conditions the freeze switch may not function, thus continuing to allow the compressor to run. Build up of ice on the evaporator coil fins can result. This condition can result in reduced air flow and cooling. To negate this condition, it is permissible to limit the coil temperature by adjusting the cam CCW. Approximately 8° of angular cam rotation (CCW) will increase the temperature set point 1°F higher. The final setting is left to the discretion of the mechanic.

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

OTHER PROBLEMS (cont'd)

Pressure Switch Specifications

High-Pressure Switch (ES57008-4) - JBS919-1

ELECTRICAL	LOAD - 3 amp - inductive @ 28 vdc 5 amp - resistive
	INTERFACE - KNIFE SPLICE
	SWITCH TYPE - SPDT
	FLUID - FREON - 12
ENVIRONMENTS	TEMP. - AMBIENT -40° to 140°F MAX - OPERATING 70° to 140°F MAX
	NEMA CLASS - WEATHERPROOF
PRESSURE DATA	SYSTEM NORMAL PRESS: 175 PSIG
	SYSTEM PROOF PRESS: 350 PSIG
	SYSTEM BURST PRESS: 750 PSIG
	SW ACTION PRESS: 350 PSIG ± 7 PSIG
	CONTACTS:- OPENING ON INCREASING PRESS.
	SW SET POINT:- SET & SEALED @ FACTORY
	RESET POINT HYSTERISIS STD PSI
PRESS. PORT FITTING	1/8 NPT (MALE) STD

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd)

OTHER PROBLEMS (cont'd)

Pressure Switch Specifications

Low -Pressure Switch (ES57008-2) - JBS919-1

ELECTRICAL	LOAD - 3 amp - inductive @ 28 vdc 5 amp - resistive
	INTERFACE - KNIFE SPLICE
	SWITCH TYPE - SPDT
	FLUID - FREON - 12
ENVIRONMENTS	TEMP. - AMBIENT -40° to 140°F MAX - OPERATING 70° to 140°F MAX
	NEMA CLASS - WEATHERPROOF
PRESSURE DATA	SYSTEM NORMAL PRESS: 175 PSIG
	SYSTEM PROOF PRESS: 350 PSIG
	SYSTEM BURST PRESS: 750 PSIG
	SW ACTION PRESS: 30 PSIG ±10 PSIG
	CONTACTS:- OPENING ON DECREASING PRESS.
	SW SET POINT:- SET & SEALED @ FACTORY
	RESET POINT HYSTERISIS STD PSI
	PRESS. PORT FITTING 1/8 NPT (MALE) STD

C. ELECTRICAL SYSTEM TROUBLESHOOTING AND DIAGNOSIS (cont'd.)

OTHER PROBLEMS (cont'd.)

PRESSURE SWITCH SPECIFICATIONS (cont'd.)

JBS 2020-1 (ES57009-1) PRESSURE SWITCH ASSY.

ELECTRICAL	Interface - knife splice
	Switch Type - O.D.D. 3 level switch
	Fluid - Freon 12
	Clutch switch: 1.6 amps @ 28 vdc
	Fan switch: 70 mAmps @ 28 vdc
PRESSURE DATA	System Normal Pressure: 175 psig
	System Proof Pressure: 350 psig
	System Burst Pressure: 750 psig
	SW High Pressure - OFF at: 305 ± 30 psig
	SW High Pressure - ON at: 203 ± 20 psig
	SW Low Pressure - ON at: 42 psig max
	SW Low Pressure - OFF at: 22 ± 7 psig
	SW Set Point - Set and sealed at factory
PRESS. PORT FITTING	7/16 - 20 UNF-2B Thread (female)
ENVIRONMENT	Temp: Ambient - 0 deg C to 140 deg C
	Gas - -40 deg C to 90 deg C

D. SERVICE AND REPLACEMENT INSTRUCTIONS

SERVICE AND REPLACEMENT INSTRUCTIONS

OIL LEVEL AND EXPANSION VALVE SETTING

Compressor Oil Level

Prior to initial system operation, the compressor is to be serviced with the correct amount of refrigerant oil, P/N SUNISO No. 5GS, TEXACO CAPELLA E, or Virginia Chemicals 500 Viscosity.

With the compressor horizontal (oil service plug pointing straight up) add oil, if necessary, until the dipstick indicates 4 to 6 increments. Then, add 6 oz of oil (using a funnel) directly to the discharge plumbing line. NOTE: Above levels yield 8 oz to 10.5 of oil.

If the compressor is replaced, drain the oil from the new compressor; drain and measure the oil from the old compressor. Add this amount plus one ounce of new oil to the new compressor.

In the event of the replacement of a condenser or evaporator coil, add 2-3 ounces of new oil to the discharge line.

Expansion Valve Setting

Normally, the expansion valves should not require adjustment as they have been pre-set at the factory. Contact the Parker Hannifin Service Dept at the number listed in the Introduction of this manual regarding expansion valve settings.

COMPRESSOR DRIVE BELT REPLACEMENT AND TENSION ADJUSTMENT (cont'd)

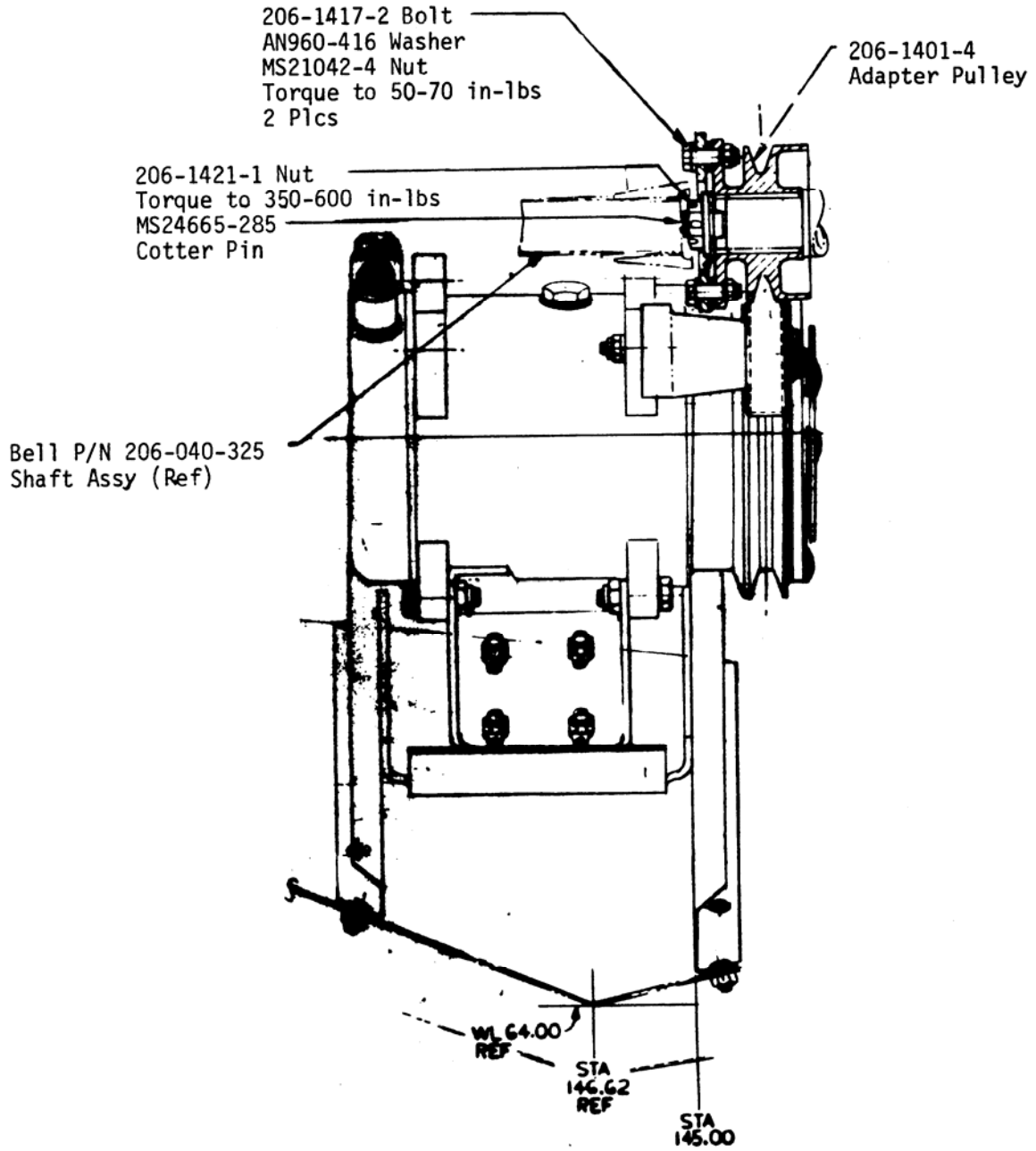
206-0400-3 Compressor Installation

1. Disconnect battery ground cable per Bell 206 Service Manual.
2. Cut off and discard old belt.
3. Detach Bell p/n 206-040-325 Shaft Assembly from 206-1401-4 Adapter Pulley by removing two (2) 206-1417-2 bolts.
4. Loosen compressor mounting bolts on lower right hand compressor mounting ears and loosen and backoff jamb nuts on belt tension adjusting stud.
5. Install drive belt, tension to as high as practical to preclude visible belt slippage without excessive distortion of the support structure. If the belt is new, retension after 5 hours of operation.
6. Retighten mounting hardware.
7. Reattach Bell Shaft Assembly to 206-1401-4 Adapter Pulley.
8. Reconnect battery ground cable.

D. SERVICE AND REPLACEMENT INSTRUCTIONS (cont'd)

COMPRESSOR DRIVE BELT REPLACEMENT AND TENSION ADJUSTMENT (cont'd)

206-0400-3 Compressor Installation



(Fig. D-1)

SERVICE AND RECLACEMENT INSTRUCTIONS (cont'd)

COMPRESSOR DRIVE BELT REPLACEMENT AND TENSION ADJUSTMENT (cont'd)

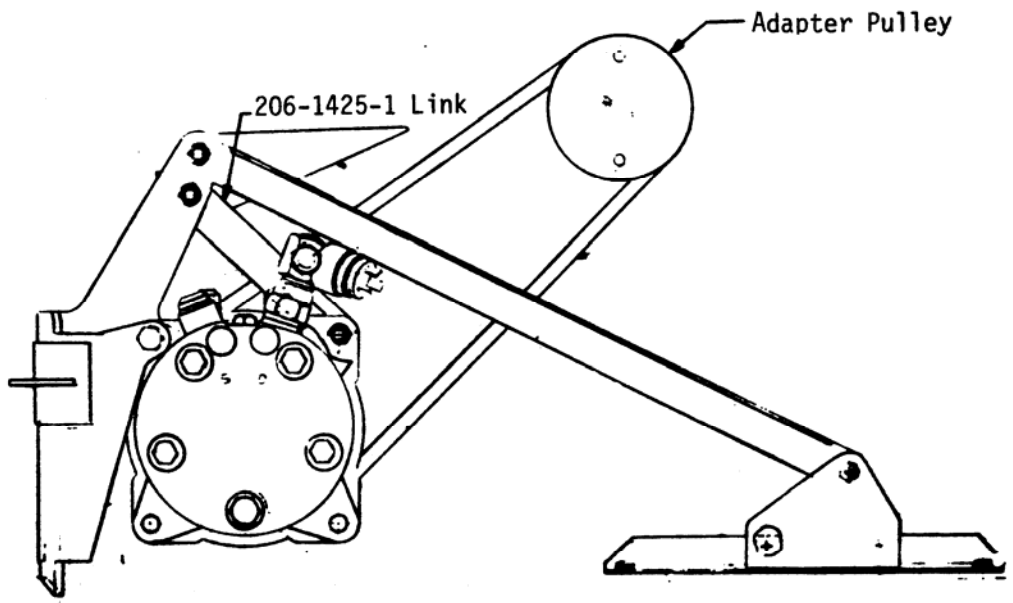
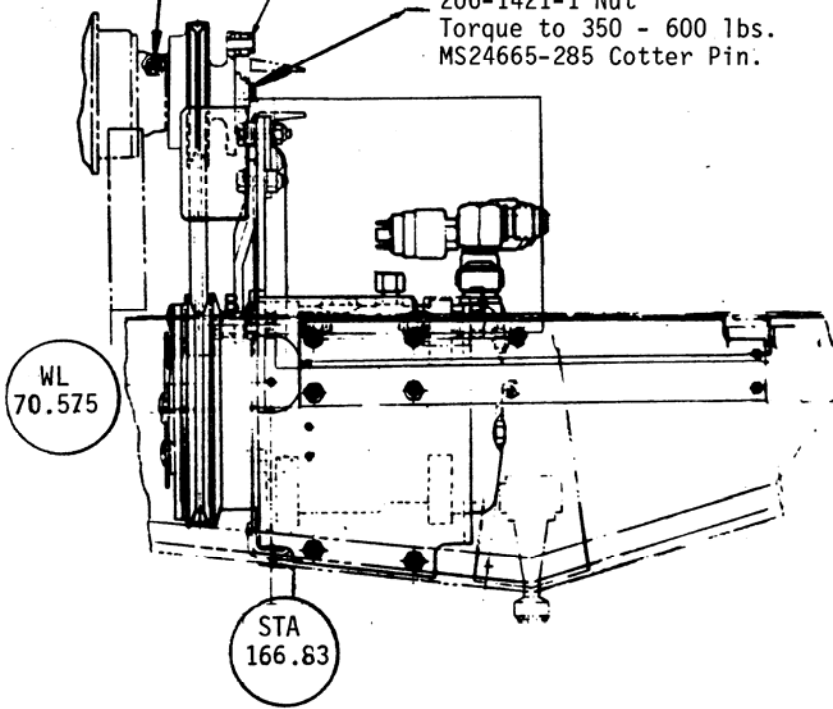
206-0403-1 Compressor Installation

1. Disconnect battery ground cable per Bell 206 Service Manual.
2. Cut off and discard old drive belt, if it is not yet off.
3. Disconnect tail rotor short shaft from 206-1401-4 or-6 Adapter Pulley by removing two (2) 206-1417-2 bolts.
4. Loosen the two (2) pairs of nuts and bolts that secure the two upper left side compressor mounting ears to the compressor mount. Loosen the two (2) pairs of nuts and bolts that secure the opposite ends of the 206-1425-1 link to the mount 2nd upper right hand compressor mounting ear.
5. Install new drive belt on adapter pulley and clutch pulley.
6. Check alignment of pulleys. If necessary, redistribute the washer stacks on the bolts. Reinstall bolts, set belt tension and retighten mounting bolts.
7. Belt tension should be as high as practical to preclude visable belt slippage without excessive distortion of the support structure. If belt is new, retension after 5 hours of operation.
8. Reinstall tail rotor short shaft to adapter pulley and torque nuts to between 50 and 70 inch pounds.
9. Reconnect battery ground cable.

206-1401-4 Adapter Pulley
or 206-1401-6 Adapter Pulley

206-1417-2 Bolt
AN960-416 Washer
MS21042L4 Nut
Torque Nut to 50-70 in-lbs
2 places

206-1421-1 Nut
Torque to 350 - 600 lbs.
MS24665-285 Cotter Pin.



(Fig. D-2)

BELT REPLACEMENT AND TENSION ADJUSTMENT-AFT
COMPRESSOR INSTALLATIONS (206-0404, 206-0405,
206-0406-1, 206-0406-2)

Because of limited space, and short belt spans the use of commercial belt tension measuring devices is not practical.

Procedure:

1. Disconnect battery ground cable per BELL 206 Service Manual.
2. Loosen the compressor pivot bolts⁽¹⁾ Also loosen the MS21042-5 nut and the AN315-5 nut securing the adjusting support.
3. Remove the short shaft assembly from between the free-wheeling output shaft and the adapter pulley. ⁽¹²⁾
4. Loosen the four (4) AN4-11A⁽²⁾ bolts securing the compressor mount to the Pallet Board Assembly and slide the Compressor Assembly forward.
5. Remove the old belt and install a new one. ⁽¹³⁾
6. Slide the Compressor Assembly aft and align the Adapter and Clutch Pulleys.
7. Tighten the Compressor Mount securing bolts.
8. Tighten the MS21042-5 nut ⁽²⁾ to tension the belt. Belt tension should be as high as practical to preclude visible belt slippage without excessive distortion of the support structure. If the belt is new, retension after 5 hours of operation.
9. Rotate the tail rotor drive shaft at least two complete revolutions. This will seat the belt.
10. Check the belt tension again and adjust as necessary.
11. Tighten the AN315-5 nut and install the short shaft assembly. Torque the short shaft attach bolts to 70 in-Lbs.
12. Reconnect the battery ground cable.
13. After one hour of operation, check and adjust the belt tension as required.

D-6A

BELT REPLACEMENT AND TENSION ADJUSTMENT - AFT
COMPRESSOR INSTALLATION (206-0406-3)
Reference Fig. D-4

Because of limited space and short belt spans, the use of commercial belt tension measuring devices is not practical.

PROCEDURE:

1. Disconnect battery ground cable per Bell 206 Service Manual.
2. Loosen the compressor pivot bolts. Also, loosen the MS21042-5 nut and the AN315-5 nut securing the adjusting support.
3. Remove Bell Shaft Assembly, P/N 406-040-315-111, from between the Free-Wheeling Output and the oil cooler fan shaft assembly.
4. Loosen the four (4) AN4-11A bolts securing the compressor mount to the Pallet Board and slide the compressor mount forward.
5. Remove the old belt and install a new one.
6. Slide the compressor assembly aft and align the compressor clutch pulley with the pulley on the tail rotor drive shaft.
7. Tighten the compressor mount securing bolts.
8. Tighten the MS21042-5 nut to tension the belt. Belt tension should be as high as practical to preclude visible belt slippage without excessive distortion of the support structure. If the belt is new, retension after 5 hours of operation.
9. Rotate the tail rotor drive shaft at least two complete revolutions. This will seat the belt.
10. Check the belt tension again and adjust as necessary.
11. Tighten the AN315-5R nut and install the short shaft (Bell P/N 406-040-315-111) being careful to reinstall the nuts, bolts, and washers in the orientation, quantity, and location as was removed. Torque nuts to 150 to 180 in - lbs. Perform a check on the gap between the forward face of the pulley and the aft flange face of the oil cooler fan shaft end adapter as described in the "Pulley and Adapter Clearance Check".
12. Reconnect the battery ground cable.
13. After one hour of operation, check and adjust the belt tension as required. NOTE: Whenever the disc pack and adapter on the forward end of the oil cooler fan shaft are removed, verify

D-6B

verify that the installation has been performed as follows:

On the bench, assemble the Bell adapter, P/N 206-040-373-101, to the disc pack P/N 406-040-340-101 with existing Bell bolt, P/N 20-065-05008 and JBS15005-3 washer (under bolt head with countersink facing the head) installed in the adapter. Note that the JBS15005-3 washer is olive drab in color. Position disc pack on the bolts with one JBS15005-3 washer per bolt between the disc pack and adapter. NOTE: The radius of the washer must be mated against the disc pack. After the disc pack is in place, add (1) JBS15005-3 washer on each bolt under the existing Bell nut, P/N EWSN26M-5, with the radius edge facing the disc pack. Insure that the bolts are installed as described with the bolt head on the adapter side of the assembly, then torque nuts 150 to 180 in - lbs.

PULLEY AND ADAPTER CLEARANCE CHECK

(206-0406-3 Compressor Installation) - Fig. D-4A

NOTE: Whenever the oil cooler fan shaft assembly on the shaft between the Free-Wheeling Output and the oil cooler fan shaft are removed, the following check should be made.

1. Verify that the Bell adapter (P/N 206-040-373-101) and the disc pack (P/N 406-040-340-101) located on the forward end of the oil cooler fan shaft are assembled as described in the Note on the Belt Replacement and Tension Adjustment Section for the 206-0406-3.
2. After the assembled disc pack and adapter have been slid onto the oil cooler fan shaft (on the forward side of the pulley), Bell P/N 206-040-320-103, verify that the shaft assembly (P/N 406-040-315-111) between the Free-Wheeling Output and the oil cooler fan shaft is attached to the disc pack and adapter assembly as described:

Bell bolt (P/N 20-065-05008 and Bell washer (P/N 214-040-611-003 are installed into the aft side of the disc pack, P/N 406-040-340-101(washer countersinks facing bolt head) followed by one washer, either P/N 214-040-611-003 or JBS15005-3 "olive drab color" (use the washer that was installed before the removal) between the disc pack and the adapter on the shelf assembly P/N 406-040-315-111.

NOTE: Radius edge of washer must mate against the disc pack. Bell washer P/N 140-007-20-19-2 and Bell P/N EWSN26M-5 are then installed on the two bolts securing the aft end of Bell shaft assembly, P/N 406-040-315-111. Nuts should be torqued 150 to 180 in - lbs. The forward end of the shaft should be reinstalled with the existing hardware.

3. Measure the gap between the forward face of the pulley and the aft flange of P/N 206-040-373-101 adapter. If the gap is .5280 or greater then the installation is acceptable. If the gap is less than .5280 then remove the Bell washer (1 each bolt) P/N 214-040-611-003 between the Bell disc pack P/N 406-040-340-101 and the aft end of the shaft, P/N 406-040-315-111, and replace with JBS15005-3 washer (olive drab in color). The radius edge of the washer must face the disc pack. If this has already been accomplished then proceed to Item 4. Measure the gap again. If it is .5280 or greater then the installation is acceptable.
4. If the measured gap is less than .5280 then replace Bell washers P/N 214-040-611-003 (2 each bolt) between the disc pack (located at STA 165.969 near the engine) and the adapter on the forward end of Bell shaft assembly,

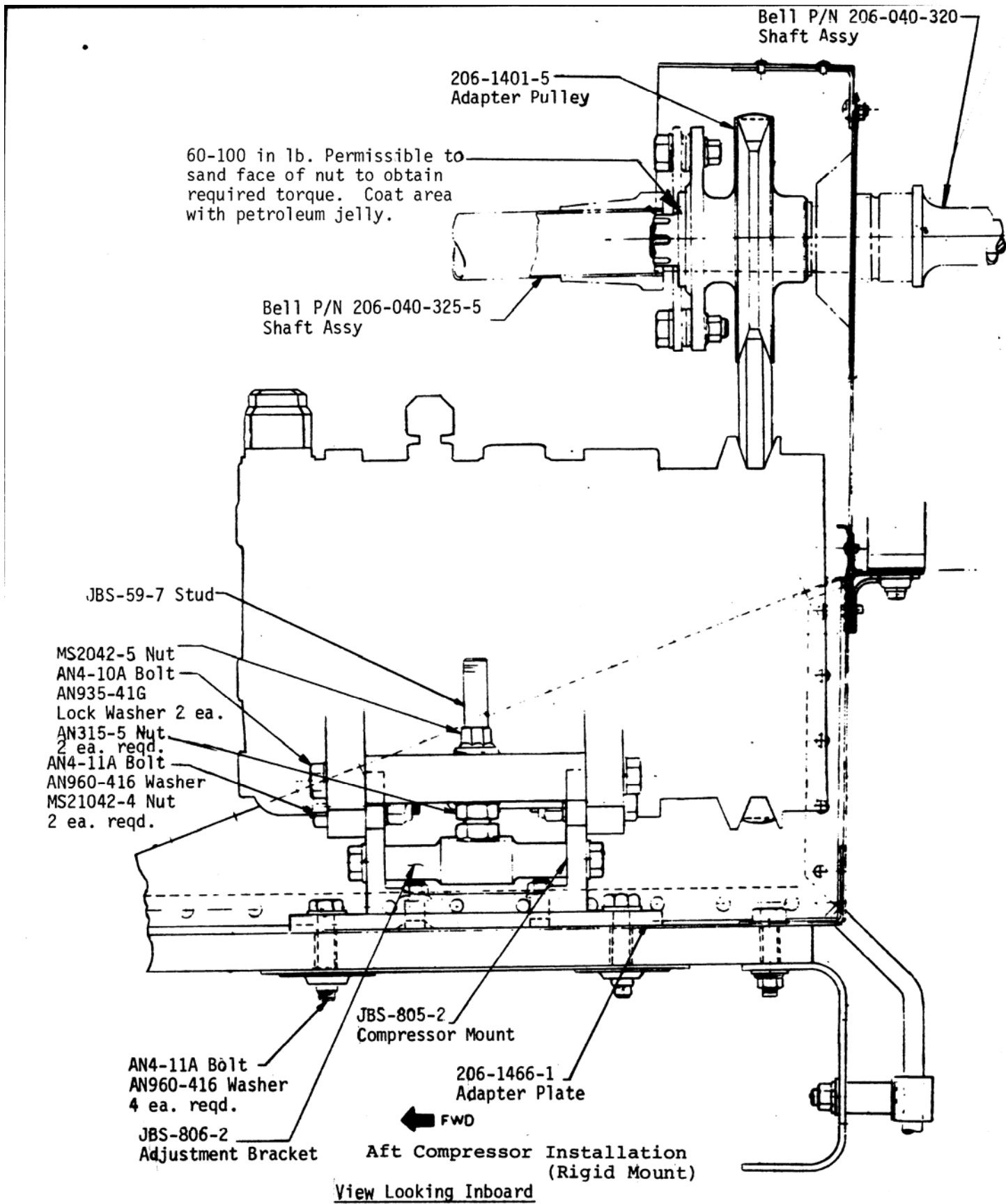
D-6D

P/N 406-040-315-111, with JBS15005-3 washers (olive drab in color). Radius edge of washer must face disc pack. NOTE: The existing washers, Bell P/N 214-040-611-003, between the disc pack and the output shaft adapter may then be replaced with the olive drab JBS15005-3 washers if needed to achieve the proper gap, but do not replace more washers than is necessary to achieve the correct gap or slightly more.

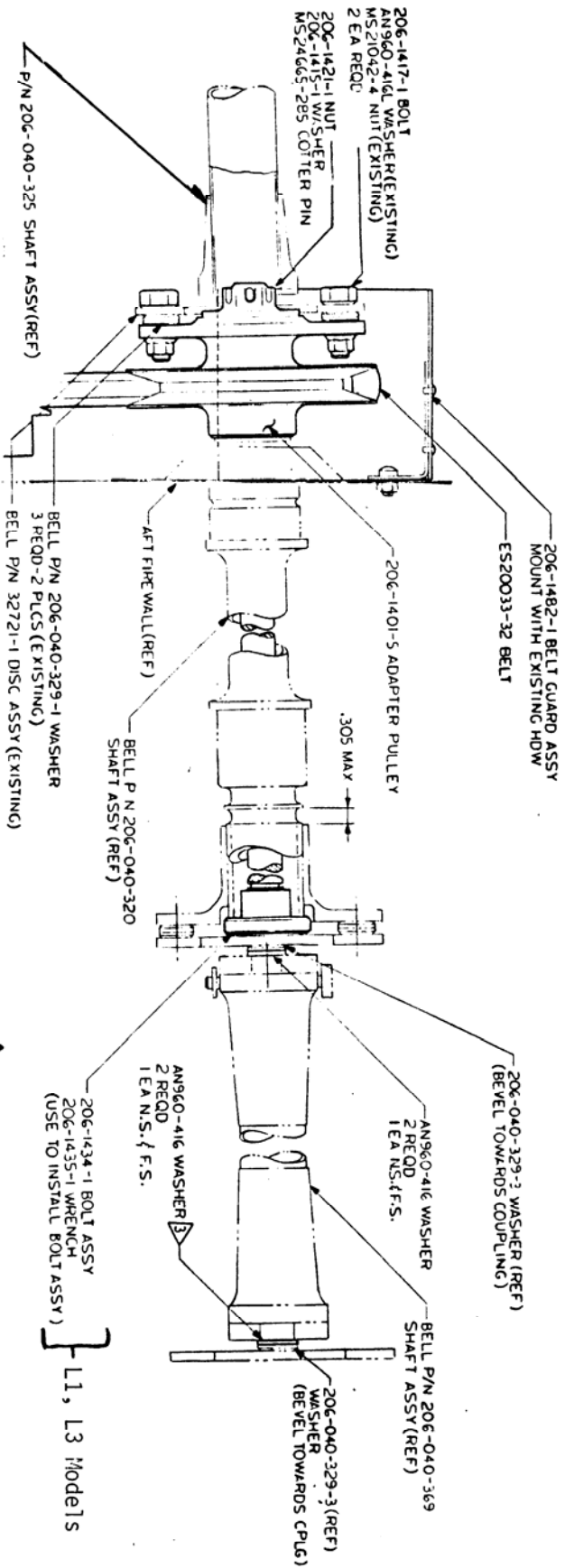
PULLEY REMOVAL AND INSTALLATION PROCEDURE

(206-0406-3 Compressor Installation) - Fig. D-4A

1. Disconnect battery ground cable per Bell 206 Service Manual.
2. Loosen the compressor pivot bolts. Also, loosen the MS21042-5 nut and the AN315-5 nut securing the adjusting support.
3. Loosen the four (4) AN4-11A bolts securing the compressor mount to the pallet board assembly and slide the compressor assembly forward.
4. Remove the shaft, P/N 406-040-315-111, between the Free-Wheeling Output and the oil cooler fan shaft (P/N 206-040-320-103) noting the quantity, location, and orientation of the existing hardware. NOTE: Remove the nuts, bolts, and washers securing the disc pack to the forward shaft 406-040-315-111, allowing the disc pack and the splined shaft adapter, 206-040-373-101 to be removed as one assembly.
5. Remove the four (4) NAS1351-3-6 screws securing the internal mounting ring (P/N JBS15005-1) to the pulley.
6. Remove pulley (P/N JBS15005-2).
7. When reinstalling the JBS15005-2 pulley coat the inside of the pulley with spline grease between the threaded end of the pulley and the counterbore. Coat the respective area of the shaft including the MS28775-211 o-ring with spline grease.
8. Install the JBS15005-2 pulley on the oil cooler fan shaft. Install wrench 206-1435-2 on Bell Thomas Coupling, P/N 206-040-373, using existing hardware. Using spanner wrench (Snap-On P/N APS363 or equal), hold pulley in place. Slide Thomas Coupling with wrench installed over shaft and torque to 200 to 300 in/lb. Place wrench, P/N 206-1435-2, with aircraft's tools.
9. Install JBS15005-1 splined internal ring over the shaft and align holes to match holes of pulley. Position the ring until holes align. NOTE: Pulley may be adjusted slightly to achieve alignment, maintaining 200 to 300 in - lbs. torque.
10. Install (4) NAS1351-3-6 screws in the JBS15005-1 ring and torque 50 to 70 in - lbs. Safety wire the four screws with MS20995C41 Single Wire Method in accordance with MS33540.
11. Install belt and follow the installation procedure per the Belt Replacement and Tension Adjustment Procedure for the 206-0406-3.
12. Perform the Pulley and Adapter Clearance Check.



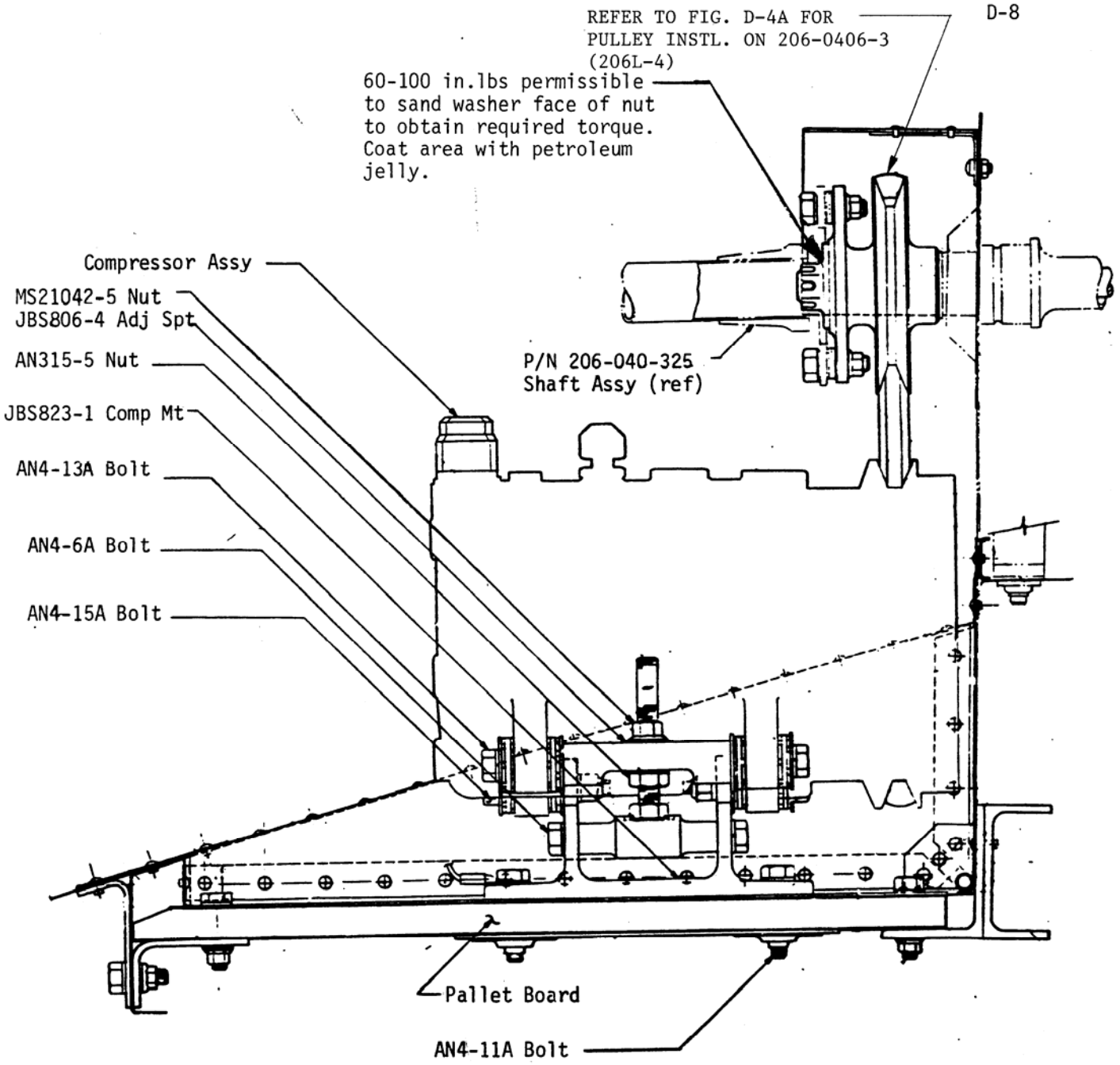
(Fig. D-3)



▲ 206-1470-1 Bolt Assy B Models

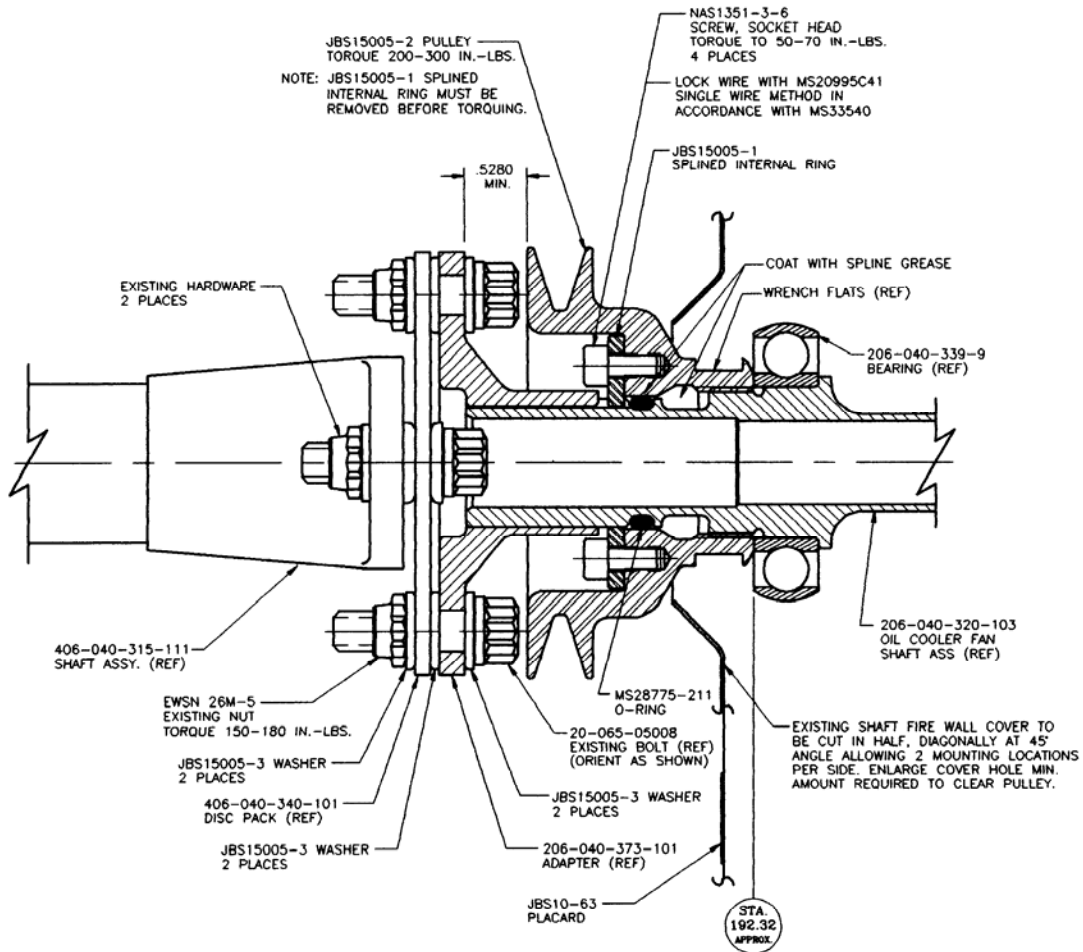
▲ 206-1434-1 Bolt Assy supercedes
 206-1470-1 Bolt Assy for spares.

Model 206 B, L1, L3 Air Condition
 Aft Compressor Drive, Tail Rotor
 Configuration



206-0406-1, -2 and -3 COMPRESSOR INSTALL
206-0404-0405 (Similar)
 (Isolated Compressor Mount)

(Fig. D-4)



206-0406-3 COMPRESSOR
DRIVE PULLEY INST'L -206L4
FIGURE D-4A

D. SERVICE AND REPLACEMENT INSTRUCTIONS (cont'd)**EVAPORATOR REPLACEMENT****206-0203 and 206-0204 Installations****Removal of Evaporator Assembly from Aircraft**

1. Discharge the refrigerant from the system. See "Discharging System" in the Air Conditioner Service and Maintenance Manual.
2. Disconnect battery ground cable per Bell 206 Service Manual.
3. Remove the hatshelf or passenger seat bulkhead close panel from behind the passenger seat backs.
4. Unplug the electrical wires to the evaporator freeze switch (mounted on the forward, right evaporator mounting bracket and the temperature probes (mounted in the air inlet lip).
5. Disconnect the refrigerant line fittings at the outlet manifolds and the expansion valves. Immediately plug the open lines and fittings to avoid system contamination.
6. Remove the four (4) bolts or screws that secure the evaporator mounting brackets to the deck surface.
7. Slide the evaporator assembly forward enough to expose the air outlet/flexible duct connection. Loosen the clamp, detach the duct and remove the evaporator assembly from the aircraft.

Installation

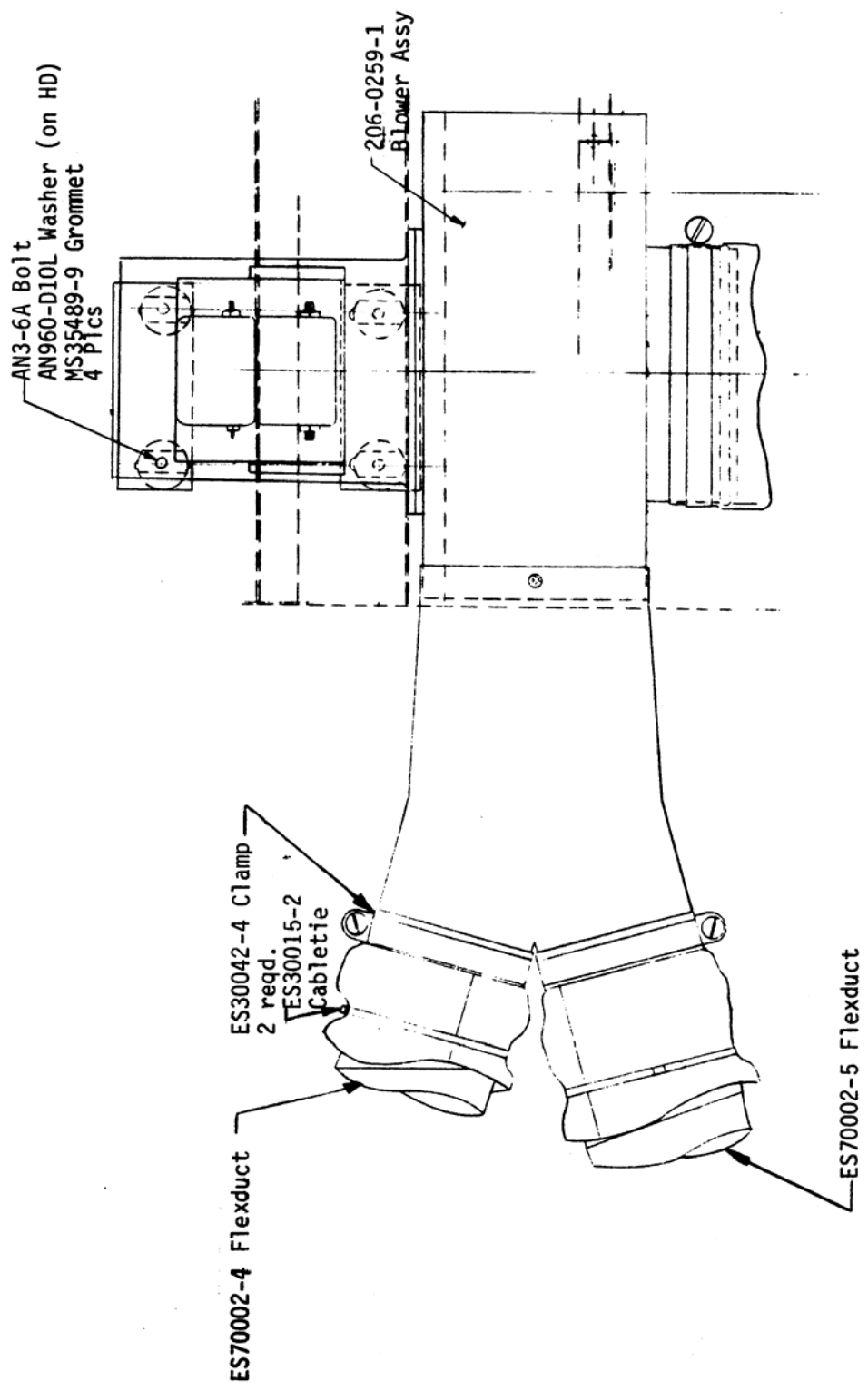
1. Follow the removal sequence in reverse.
2. Evacuate and charge the system as outlined in the air conditioner Service and Maintenance Manual.

EVAPORATOR BLOWER REPLACEMENT**Blower Assembly Removal**

1. Remove insulated flexducts from the "Y" outlet duct on the blower housing by loosening the hose clamps.
2. Detach the inlet flex duct from the blower inlet.
3. Disconnect the power wire from the blower motor.
4. Remove blower assembly from deck skin by removing the four (4) AN3-6A bolts that secure the mounting bracket to the deck and whose heads are accessible from the baggage compartment.

BLOWER ASSEMBLY INSTALLATION

1. Install assembly in the reverse sequence of removal.



(Fig. D-5)

D. SERVICE AND REPLACEMENT INSTRUCTIONS (cont'd)**CONDENSER BLOWER REPLACEMENT (cont'd)****206-0302 Installation****Removal of Blower Assembly from Aircraft**

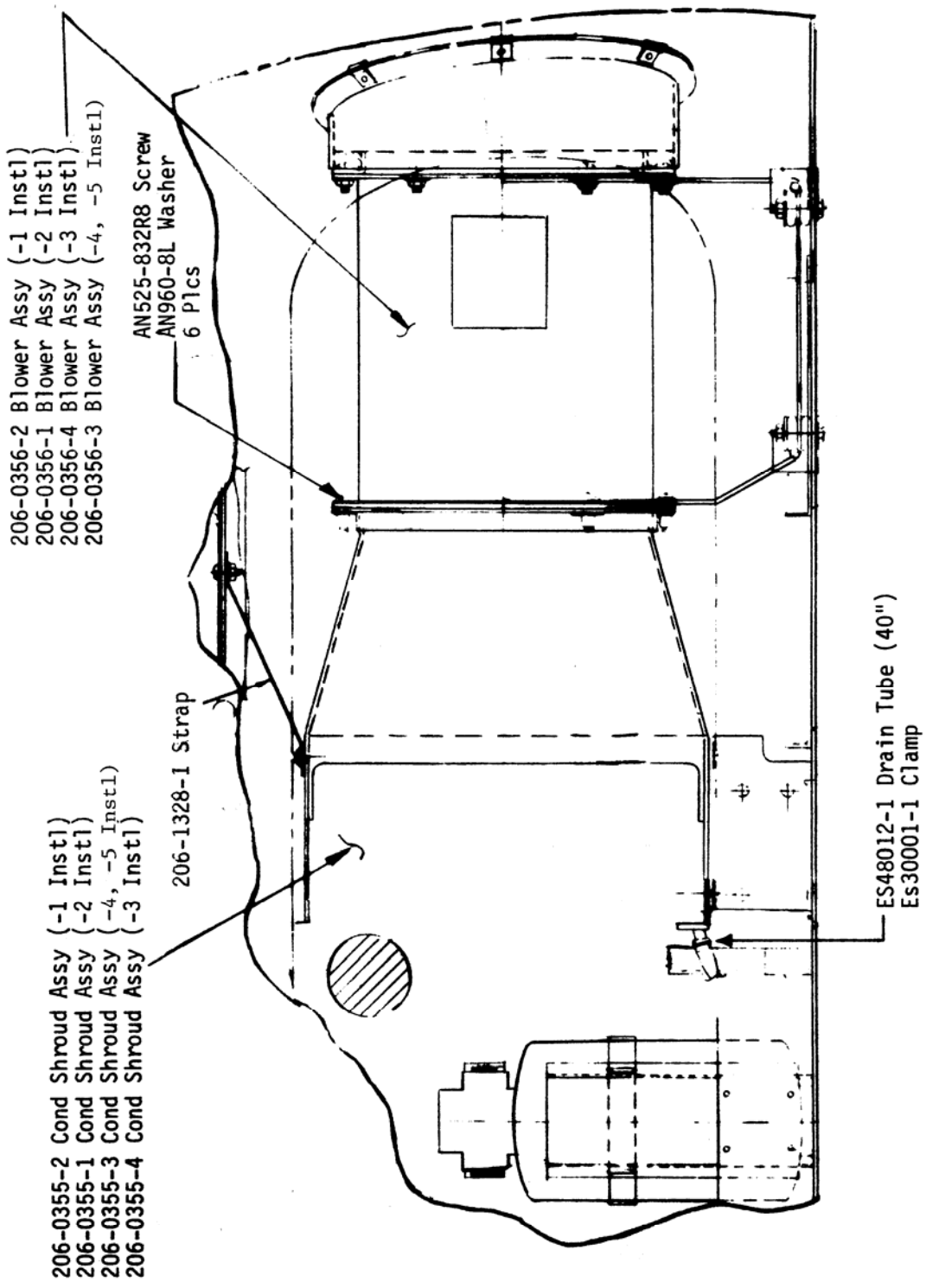
1. Disconnect battery ground cable per Bell 206 Service Manual.
2. Remove access hole cover plate from baggage compartment ceiling.
3. Disconnect the power wire on the blower.
4. Detach ES48012-1 Drain Tube from the Condenser Shroud.
5. Detach 206-1328-1 Strap from the condenser shroud (on 206L-3 and 206L-4 only).
6. Detach the condenser assembly and the blower assembly from the deck skin by removing the fasteners that secure their respective mounting brackets to the deck.
7. Shift condenser/blower assembly ground as necessary to gain access to all six (6) AN525-832R8 screws that secure the blower to the condenser shroud and detach the blower from the shroud.
8. Detach ground lead and power wire from blower motor terminals.
9. Remove blower assembly from aircraft.
10. Remove blower mounting brackets from blower.

Installation of Blower Assembly into Aircraft

1. Follow the above sequence in reverse order.

206-0302 Installation**Removal of Condenser from Aircraft**

1. Discharge refrigerant from the system. See "Discharging System" in Section C of Air Conditioner Service and Maintenance Manual.
2. Disconnect the battery ground cable per Bell 206 Service Manual.
3. Remove the access hole cover plate from the baggage compartment ceiling.
4. Disconnect the power wire on the blower motor.
5. Detach the ES48012-1 Drain Tube from the condenser shroud.
6. Detach the 206-1328-1 Strap from the condenser shroud, if one exists (on 206L-3 and L-4 models only).
7. Detach inlet and outlet refrigerant lines to the condenser fittings and insert caps into the line and fitting openings.
8. Detach the condenser/blower assembly from the deck skin by removing the fasteners that secure their respective mounting brackets to the deck.



(Fig. D-6)

D. SERVICE AND REPLACEMENT INSTRUCTIONS (cont'd)CONDENSER BLOWER REPLACEMENT (cont'd)

9. Shift the condenser/blower assembly around as necessary to gain access to all six (6) AN525-832R8 screws that secure the blower to the condenser shroud. Detach the blower from the shroud.
10. Remove the condenser from the aircraft.

Installation of Condenser

1. Follow the above sequence in reverse order.
2. Evacuate and charge the system as outlined in the Air Conditioner Service and Maintenance Manual.

206-0303-1 InstallationRemoval of Condenser/Blower Pallet Assembly from Aircraft

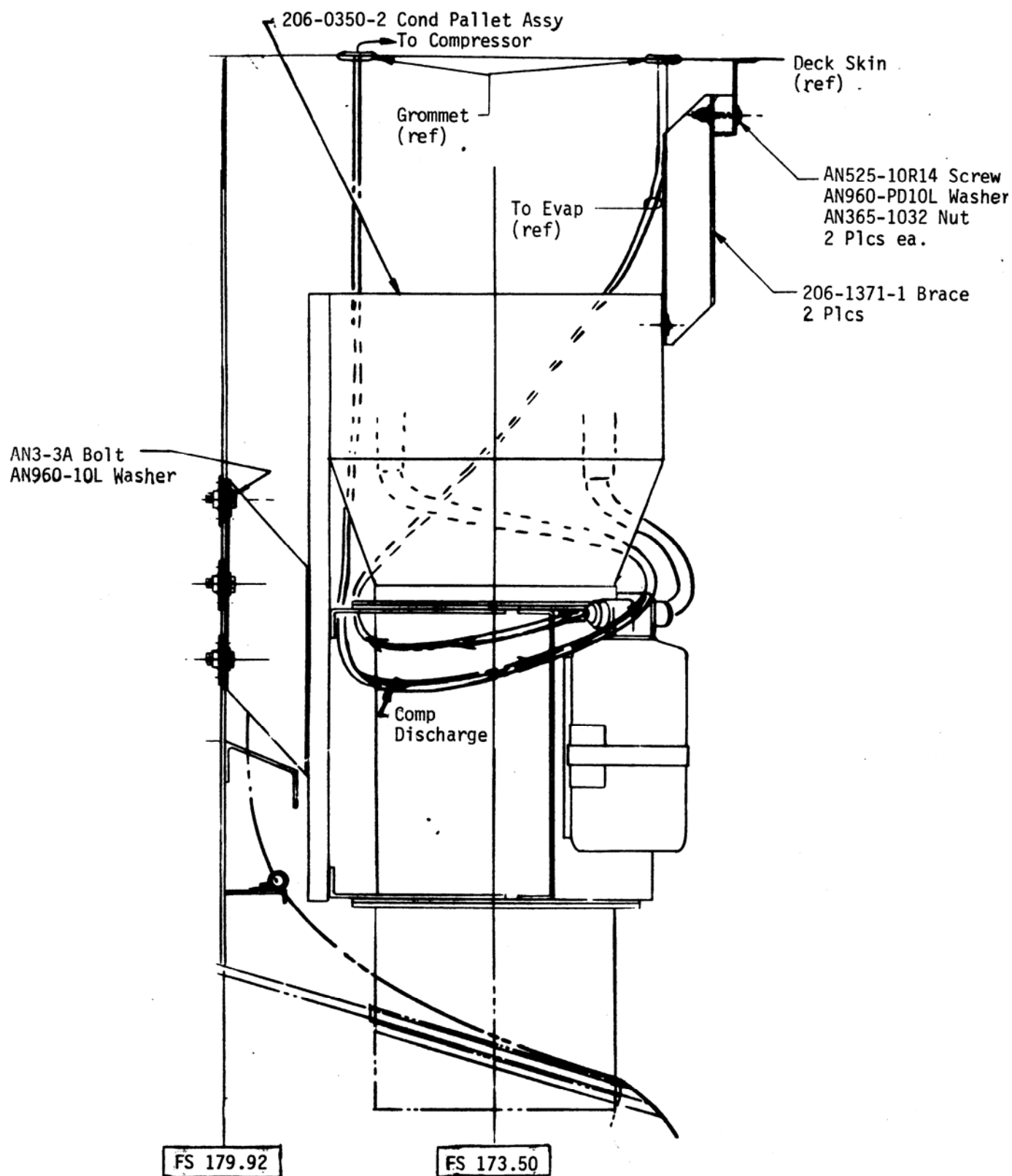
1. Discharge refrigerant to atmospheric pressure as outlined in the Parker Hannifin Basic Vapor Cycle System Service Manual.
2. If one is installed, remove the baggage compartment aft enclosure panel to gain access to area aft of baggage compartment.
3. Disconnect the battery ground cable per Bell 206 Service Manual.
4. Disconnect power and ground wires from motor terminals.
5. Disconnect and cap refrigerant lines at the receiver/drier outlet and the condenser inlet.
6. Remove # 10 screws (2 each) that attach the upper forward condenser shroud edge to the two (2) 206-1371-1 Braces.
7. Remove six (6) AN3-3A bolts that attach the pallet mounting brackets to the bulkhead skin aft of the pallet board.
8. Remove pallet board assembly from aircraft through baggage compartment.

Removal of Blower and Condenser from Pallet Board Assembly

1. Remove blower/condenser combination from pallet board.
2. Remove air outlet collar, receiver/drier bracket, and condenser shroud from blower by removing the twelve (12) AN525 Screws from around the inlet and outlet flanges.

Assembly and Installation into Aircraft

1. Follow the above sequence in reverse order.
2. Evacuate and charge the system as outlined in the Air Conditioner Service and Maintenance Manual.



(Fig. n-7)

D. SERVICE AND REPLACEMENT INSTRUCTIONS

FORWARD BLOWER REPLACEMENT (cont'd)

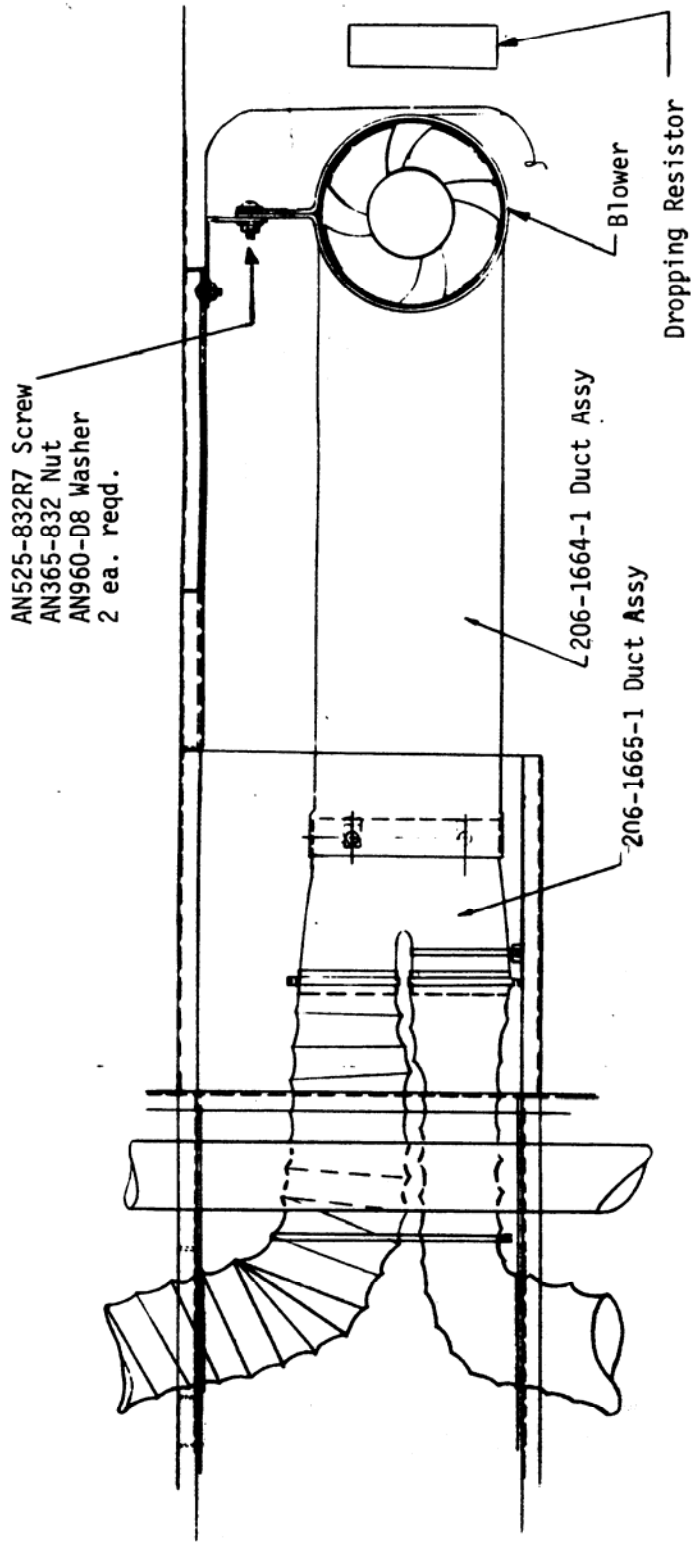
206-0601-1 Blower Installation

Removal from Aircraft

1. Disconnect the battery ground cable per Bell 206 Service Manual.
2. Remove the access panels on the left side of the instrument panel console to expose the vertically mounted blower.
3. Loosen the screw clamps that secure the ducts to either end of the blower housing.
4. Slide the top duct (outlet duct) off of the blower housing.
5. Remove the two (2) AN525-832R7 screws that secure the blower mounts to the mounting clips.
6. Detach the ground wire and cut the wire splice off of the blower positive lead wire.
7. Slide the blower up out of the lower duct (blower inlet) and remove it from the console tunnel.

Installation into Aircraft

1. With the two (2) blower mounting brackets held loosely in place on the blower housing, slide the blower down into the lower duct in the console tunnel.
2. Reconnect the positive lead to the power wire with a permanent wire splice and reconnect the ground lead as before.
3. Attach the blower mounting brackets to the mounting clips.
4. Connect the upper duct to the top opening of the blower housing.
5. Install and tighten the two (2) screw clamps to secure the inlet and outlet ducts to either end of the blower housing.
6. Install the console tunnel access panels.
7. Reconnect the battery ground cable.



(Fig. D-8)

D. SERVICE AND REPLACEMENT INSTRUCTIONS (cont'd)

FORWARD BLOWER INSTALLATION (cont'd)

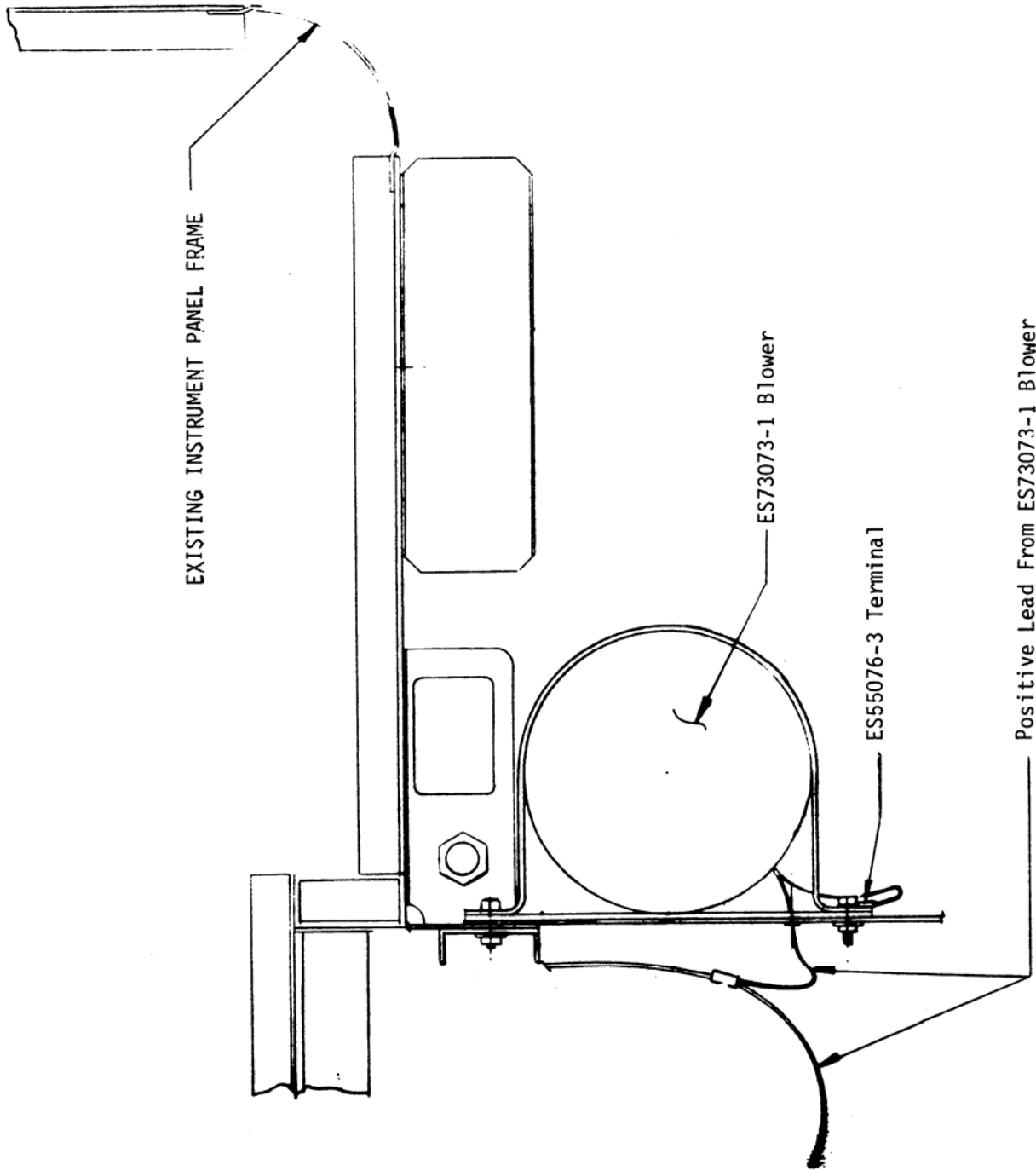
206-0602-1 Forward Blower Installation

Removal of Blower from Aircraft

1. Disconnect the battery ground cable per Bell 206 Service Manual.
2. Loosen the screw clamps on each end of the blower housing.
3. Remove the blower mounting bolt that secures the ground wire ring terminal and loosen the three (3) remaining mounting bolts.
4. Rotate the blower to expose the positive lead wire.
5. Cut the lead wire, taking care to allow enough length to accept a wire splice on reinstallation. Also, secure the cut end of the lead that passes through the grommet in the side panel so it does not slip back through the opening.
6. Slide the blower forward and out.

Installation of Blower into Aircraft

1. Slide the blower aft through the loosened brackets and into the blower inlet duct opening.
2. Using a permanent wire splice, reconnect the blower positive lead wire to the positive wire protruding through the grommet in the side panel.
3. Push the positive lead back through the grommet while rotating the blower until the lead is hidden from view.
4. Reconnect the ground lead terminal by installing the appropriate blower mounting bolt. Tighten the remaining three (3) bolts as well.
5. Connect the forward outlet duct to the forward opening of the blower.
6. Tighten the two (2) screw clamps to secure the inlet and outlet ducts to either end of the blower housing.
7. Reconnect battery ground cable.



(Fig. D-9)

BHT 206 HEATER SYSTEM AND MAINTENANCE MANUAL

1. Systems

The bleed air heater is made up of two subsystems.

- A. Bleed Air
- B. Cabin & Ventilating Air

If freon air conditioning is also installed, the cabin and ventilating air subsystem is shared with the cooling system.

2. Principles of Operation: Bleed air from the engine flowing thru restrictors is supplied to the regulator valve. The regulator valve poppet is held closed by the spring. A very small flow of air passes through an orifice in the regulator valve to the dome covering the regulator valve diaphragm. As long as the spring tension in the pilot valve is low, dome pressure passes out the vent.

When spring tension is increased in the pilot valve, which is done manually by turning the control knob of the valve, pressure builds in the regulator valve dome proportional to that spring force and the diaphragm forces the poppet valve open. Bleed air flows through the regulator seat and forces the diaphragm to close the regulator. Therefore air pressure to the ejector nozzle is proportional to the pilot valve spring tension. Bleed air flow through the nozzle increases with increasing pressure and more heat is supplied to the cabin.

3. Troubleshooting procedures:

Perform troubleshooting for each part in accordance with Table 3-1.

TABLE 3-1

<u>SYSTEM</u>	<u>SYMPTOM</u>	<u>POSSIBLE PROBLEM</u>	<u>CORRECTIVE ACTION</u>
A (Bleed Air)	1. No Bleed Air to Regulator valve.	a. Loose or ruptured bleed air line.	1. Check for loose fittings. 2. Replace lines.
	2. No bleed air flow thru regulator valve.	a. No air to pilot valve. b. Orifice in regulator plugged. c. Diaphragm ruptured. d. Seal damaged or dirt	1. Check lines and fittings to pilot valve. 1. Replace regulator 1. Replace regulator 1. Test pilot valve by covering vent with finger. If this causes regulator to open replace pilot valve.
			NOTE: Engine may be run or shop air line may be connected to regulator inlet.
	3. Insufficient heater flow.	a. Flow restrictors installed backwards. b. Pilot valve faulty.	Check to see that long taper is downstream from engine. Test pilot valve by covering vent with finger. If heater flow increases replace pilot valve.

TABLE 3-1 (Cont'd.)

<u>SYSTEM</u>	<u>SYMPTOM</u>	<u>POSSIBLE PROBLEM</u>	<u>CORRECTIVE ACTION</u>
	4. Regulator will not shut off.	a. Dirt in regulator seat.	Remove regulator valve, Lower Cover Only and clean chamber, poppet, spring and seat in accordance with "Routine Maintenance" instructions.
		b. Line to pilot valve plugged or damaged.	Disconnect valve line at regulator valve. If regulator valve closes check line for blocking if regulator valve fails to close, replace regulator valve.
		c. Pilot Valve faulty.	Disconnect at pilot valve if regulator closes, replace pilot valve.
B. Duct over Temp.* Light on.		a. Defective switch.	Replace Switch.
		b. Blockage in Duct.	Clean Duct.

* NOTE:

For an ECS installation (heat & air conditioning) certain environmental conditions may require operation of the blower to preclude "duct over-temperature". This is addressed in the Flight Manual Supplement.

ROUTINE MAINTENANCE

- A. Retirement and Overhaul: Components can be replaced on in service condition. No retirement times are applicable.
- B. Pilot Control Valve: The pilot valve requires no maintenance and should not be disassembled.
- C. Ejector Nozzle: The nozzle inside the silencer assembly requires no maintenance other than backflushing with shop air if outlet ring becomes plugged. To backflush, remove silencer assembly and apply air to outlet ring, working through the ends of the silencer assembly.
- D. Flow Regulator: It is recommended that the regulator valve not be disassembled unless discrepant operation is noted. This may be caused by contamination when operating in a dusty or salty environment where engine compressor washing is employed. Where washing is employed it is further recommended that the bleed lines be disconnected at the engine before performing the work.

In the event the flow regulator becomes inoperative, field service is limited to cleaning and or replacement of the parts shown in Figure D-10. Disassembly of the upper half of the valve may result in damage to the diaphragm and require the unit to be recalibrated for proper flow. Any units that are suspected to have diaphragm damage or be out of calibration are to be returned to the factory for service.

Two configurations of valves are shown in the figure; configuration I - Pre July 1983. Configuration II - Post July 1983.

Configuration I - Pre July 1983:

1. Remove safety wire and screws - **LOWER HALF ONLY**
2. Remove lower cap exposing spring, poppet and "O"-Rings (Items 1 and 2). Clean all components.
3. Replace Poppet "O"-Ring, Item 1 , if required, lubricating with "Dow Corning Molycote #111 grease".
4. Replace Cap "O"-Ring, Item 2 , if required.
5. Reassemble in reverse order of disassembly.
6. After re-assembly, one operation of the valve is required to seat the poppet "O"-Ring.
7. Safety wire screws.

Configuration II - Post July 1983:

1. Remove Safety Wire and Screws - **LOWER HALF ONLY.**
2. Remove Snap Ring retainer plate and "Retainer Plate "O"-Ring", Item 5 .
3. Remove Poppet Retainer Item 4 and inspect Bal Seal, Item 3 for deterioration, replace as required.
4. Remove lower cap exposing spring, poppet and cap "O"-Ring, - Item 2
Clean all parts.
5. Reassemble dry in reverse order of disassembly.
6. Operate valve and observe proper operation.
7. Safety wire screws.

FIGURE INDEX NO.	PART NUMBER	DESCRIPTION
D-10 1	ES26053-1 ES49007-1*	Pressure Regulator "O"-Ring, Poppet (M83248/1-110) (Size: 110, Material: Fluorocarbon Elastomer per MIL-R-83248 CL1)
2	ES49007-2*	"O"-Ring, Cap (M83248/1-031) (Size: 031, Material: Fluorocarbon Elastomer per MIL-R-83248 CL1)
3	ES49007-4	Bal Seal.
4		Poppet Retainer.
5	ES49007-3*	"O"-Ring, Plate Retainer (M25988/1-020) (Size: 020, Material: Fluorosilicone per MIL-R-25988, TY1 CL1)
6	NAS1351C3H12	Screw - Socket Heat Cap.
7	MS20995-C20	Safety Wire.

***NOTE:** "O"-Ring sizes and material are furnished under the "MIL" number for alternate procurement. If local procurement is not possible, they may be purchased from Keith Products, Inc., 4554 Claire Chennault, Dallas, Texas 75248, under the appropriate ES49007-1, -2, or -3 Part Number.

FLOW REGULATOR P/N ES26053-1

CONFIGURATION I
PRE JULY 1983

CONFIGURATION II
POST JULY 1983

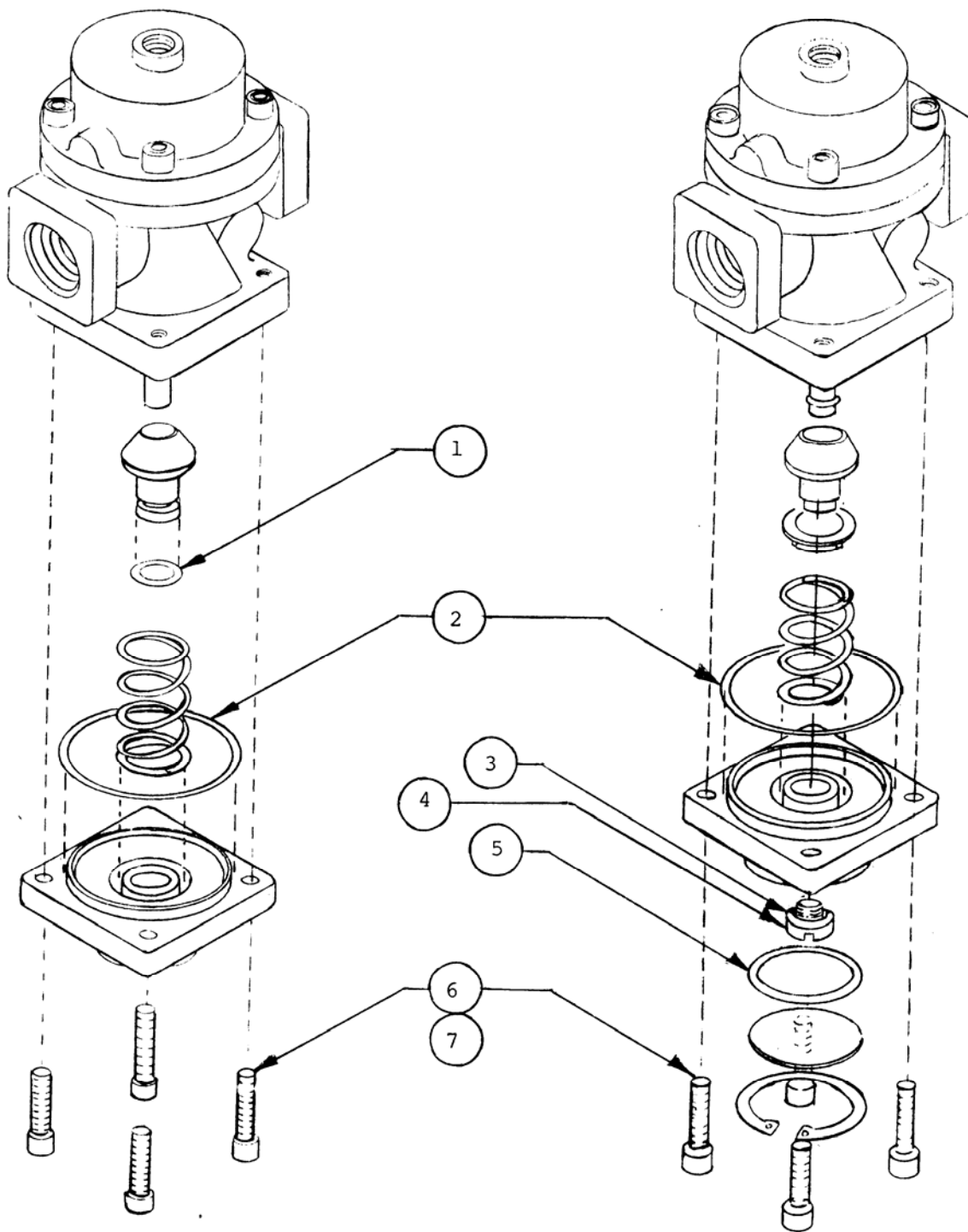


FIGURE D-10

E . ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES

EVAPORATOR BLOWER INSTALLATIONS

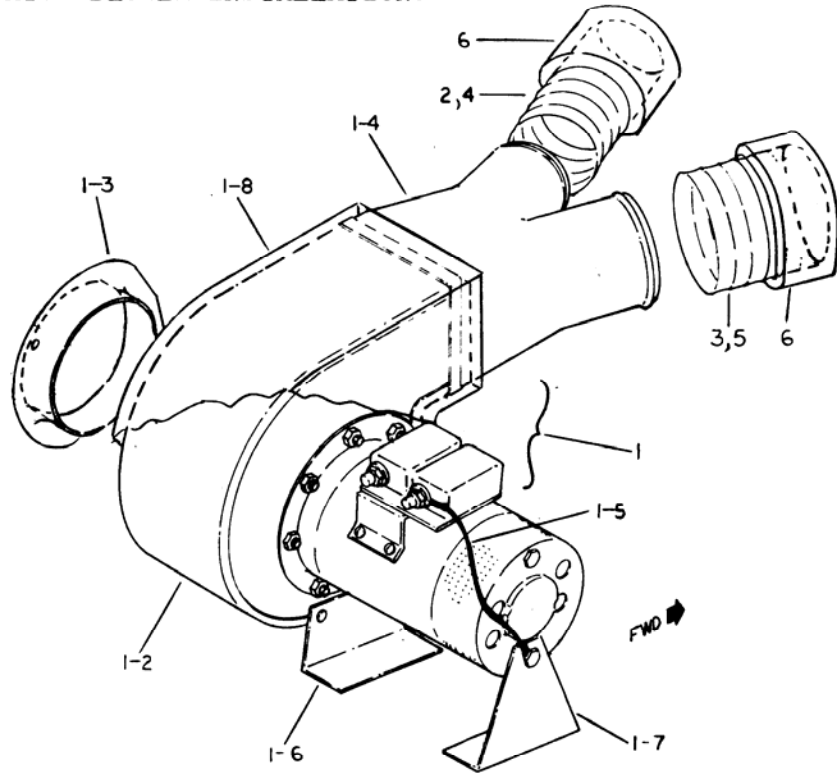
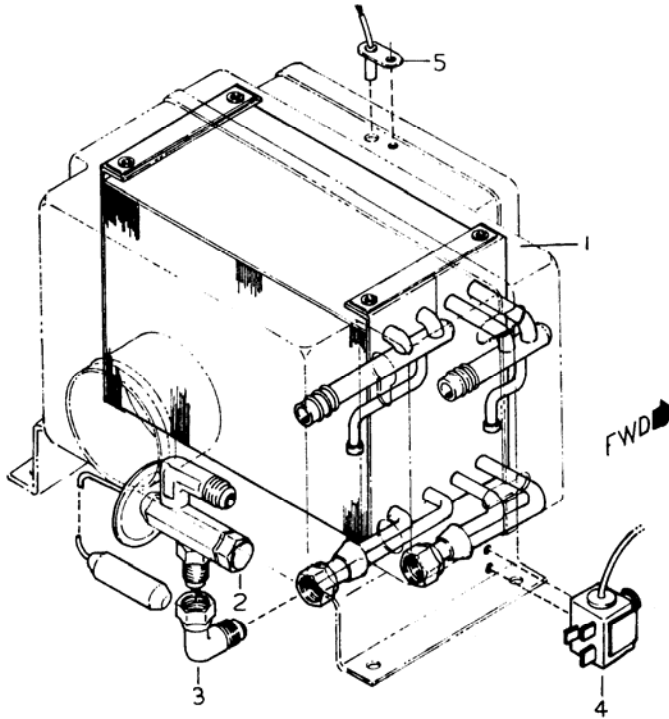


FIG. E-1

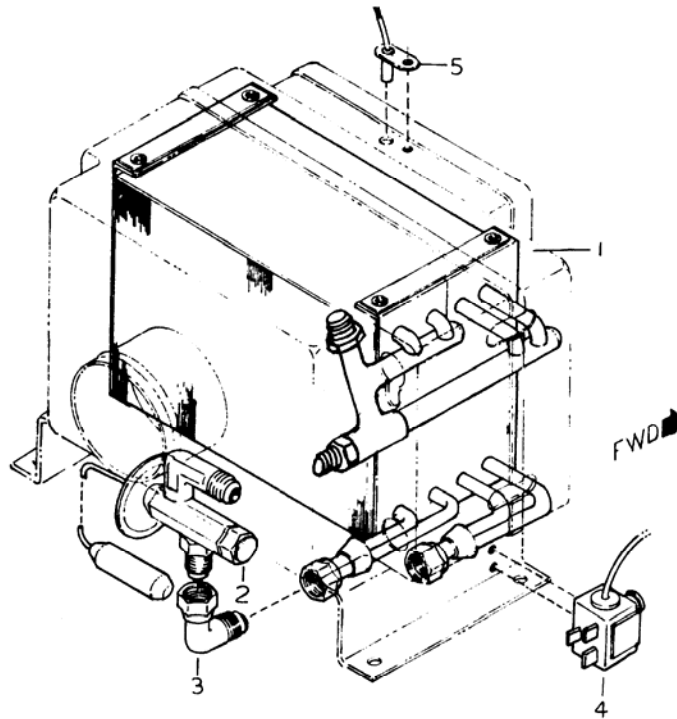
Figure Index No.	Part Number	Description	Units Per Install.
E-1	206-0202-1, -2	Blower Installation	Ref.
1	206-0259-1	Blower Assy.(Complete)	1
1-2	206-0253-1	Blower Assy.	1
1-3	206-1258-1	Collar Assy.	1
1-4	206-1259-1	Adapter Outlet	1
1-5	206-0259-11	Wire Assy.	1
1-6	206-0257-2	Bracket Assy.	1
1-7	206-0257-3	Bracket Assy.	1
1-8	JBS 363-1	Insulation HSG Assy.	1
2	ES70002-2	Duct	1
3	ES 70002-4	Duct	1
6	JBS375-2	Insulation Tubing	1
E-1	206-0202-3, -4	Blower Installation	Ref.
1	206-0259-1	Blower Assy.(Complete) (see above for parts breakdown)	1
4	ES 70010-1	Duct	108 "
5	ES 70010-1	Duct	72 "
6	JBS375-2	Insulation Tubing	1

1 ORDER LENGTH AS REQ'D. - MAXIMUM LENGTH AVAILABLE FOR A SINGLE PIECE IS 72 INCHES.

EVAPORATOR INSTALLATIONS



EVAPORATOR WITH 2 EXPANSION VALVES AND 2 SUCTION PORTS



EVAPORATOR WITH 2 EXPANSION VALVES AND SUCTION
MANIFOLD TO ACCOMODATE FWD EVAPORATOR

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
 EVAPORATOR INSTALLATIONS

E-3a

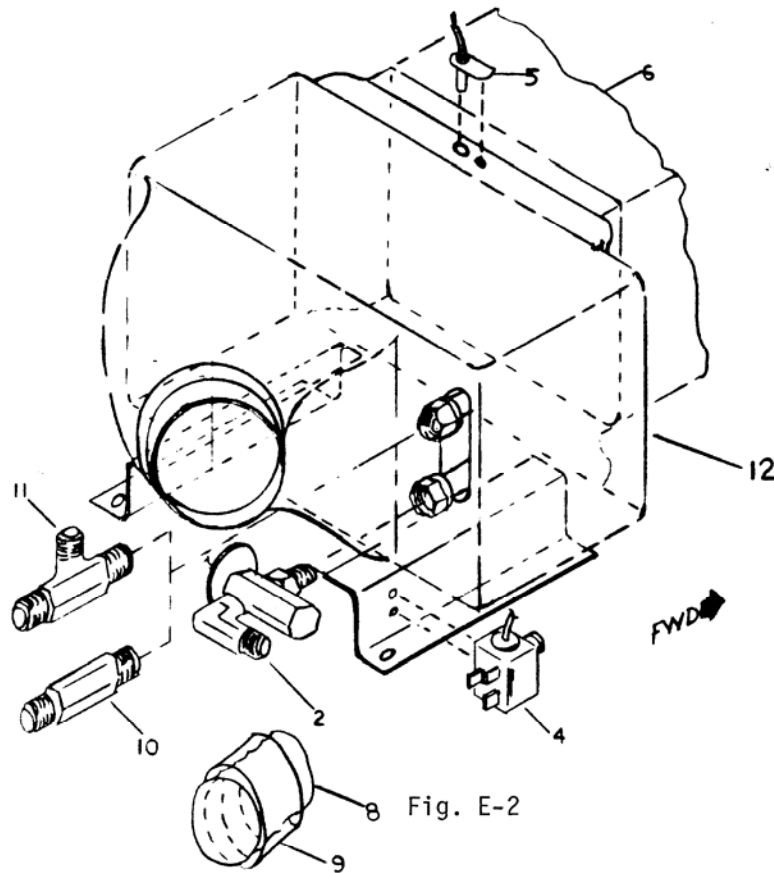


Figure Index No.	Part Number	Description	Units Per Install.
E-2	206-0203-1,-2,-3,-4	Evaporator Installations	Ref.
1	206-6260-1	Evaporator Assy	1
2	ES 26101-3 *1	Expansion Valve	2
3	ES 41046-2	Elbow	1
4	JBS 60-2 *1	Freeze Switch	1
5	ES 52126-1 *1	Temp. Sensor	2
6	206-0256-2	Return Air Adapter(-1 Inst'l)	1
6	206-1201-2	Return Air Adapter(-2 Inst'l)	1
6	206-0265-1	Return Air Adapter(-3 Inst'l)	1
6	206-0266-1	Return Air Adapter(-4 Inst'l)	1
7	206-1210-1	Screen	1
8	ES 70011-6	Duct	48"
9	JBS 365-1	Insulation Tubing	N/A
10	ES 41017-4	Union	1
11	ES 41019-7	Union Tee (FOR FWD EVAP)	1
12	JBS 2005-1	Evaporator	1

*1 Recommended spare part

Trimmed to length on inst'l

JBS 2005-1 is spares replacement for 206-0260-1

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
 EVAPORATOR INSTALLATIONS (Cont.)

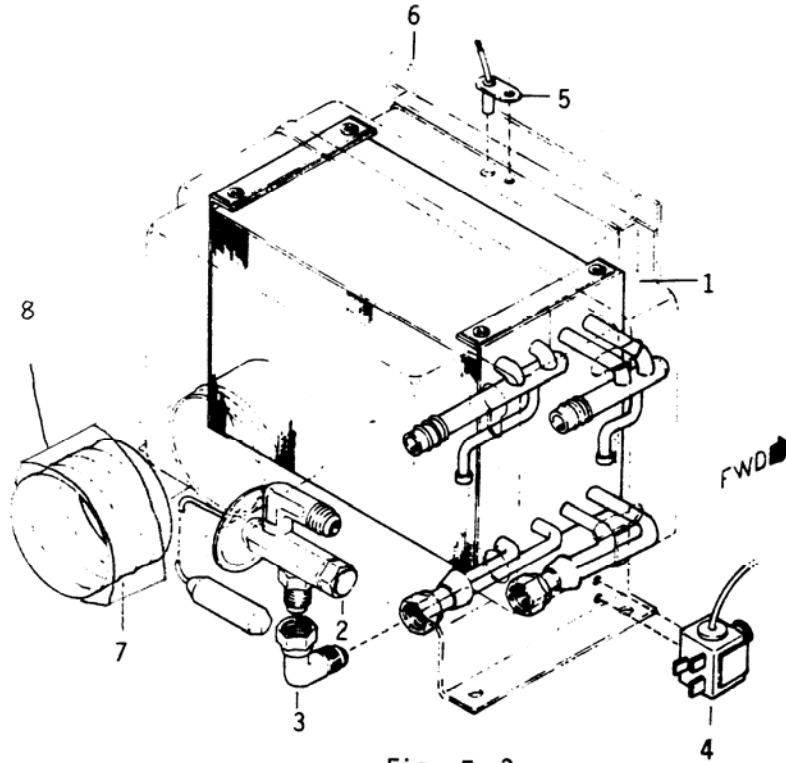


Fig. E -3

Figure Index No.	Part Number	Description	Units Per Install.
E-3	206-0204-1	Evaporator Installation	Ref.
1	206-0262-1	Evaporator Assy.	1
2	ES 26101-3 *	Expansion Valve (Note 1)	2
3	ES 41046-2	Elbow (Note 1)	1
4	JBS 60-2 *	Freeze Switch (Note 1)	1
5	ES 52126-1	Temp. Sensor (Note 1)	2
6	206-0264-2	Adaptor (Note 1)	1
7	ES70011-6	Duct	▷
8	JBS365-3	Insulation Tubing	1

* Recommended Spare Part
Note 1: Included in 206-0262-1 Evaporatory Assy

▷ Order Length Required.

CONDENSER INSTALLATIONS (cont'd)

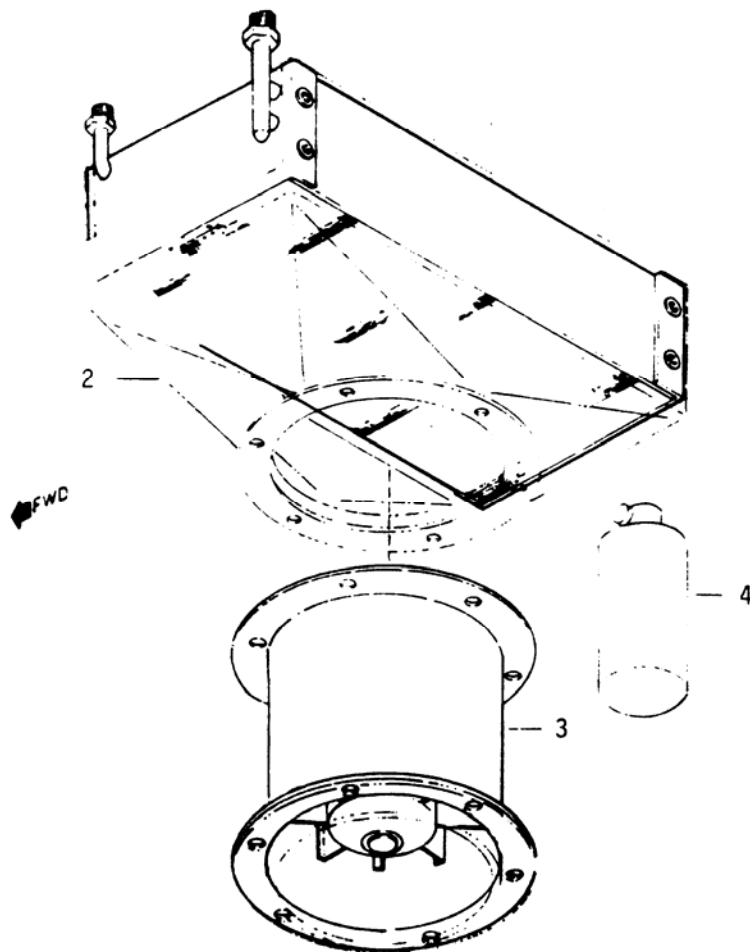


Fig. E -5

Figure Index No.	Part Number	Description	Units Per Install.
E-5	206-0303-1	Condenser Installation	Ref.
1	206-1351-1	Coil Assy.	1
2	206-1352-1	Shroud	1
3	ES 73127-5	Blower (FAN - VANEAXIAL)	1
4	ES 43029-3 *	Receiver Dryer Bottle	1
* Recommended Spare Part			

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

CONDENSER INSTALLATIONS (cont'd)

	Figure Index No.	Part Number	Description	Units Per Install.
INACTIVE	E-4	206-0302-1	Condenser Installation	Ref.
	E-4	206-0302-2	Condenser Installation	Ref.
	E-4	206-0302-3	Condenser Installation	Ref.
	E-4	206-0302-4	Condenser Installation	Ref.
INACTIVE	1	206-0355-1	Condenser Shroud Assy. (for 7" blower, mounts parallel to deck)	1
INACTIVE	1	206-0355-2	Condenser Shroud Assy. (for 6" blower, mounts parallel to deck)	1
	1	206-0355-3	Condenser Shroud Assy. (for 7" blower, mounts angled to deck)	1
INACTIVE	1	206-0355-4	Condenser Shroud Assy. (for 6" blower, mounts angled to deck)	1
INACTIVE	2	206-0356-1	Condenser Blower Assy. (7" blower, bolts to 206-0355-1)	1
INACTIVE	2	206-0356-2	Condenser Blower Assy. (6" blower, bolts to 206-0355-2)	1
	2	206-0356-3	Condenser Blower Assy. (7" blower, bolts to 206-0355-3)	1
INACTIVE	2	206-0356-4	Condenser Blower Assy. (6" blower, bolts to 206-0355-4)	1
	3	206-1351-1	Coil Assy. (included in all Condenser Shroud Assy's.)	1
	4	ES 73127-2	7" Blower (included in 7" Blower Assy's)	1
INACTIVE	4	ES 73127-5	6" Blower (included in 6" Blower Assy's)	1
	5	ES 43029-3 *	Receiver Dryer Bottle	1

* Recommended Spare Part

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

CONDENSER INSTALLATIONS (cont'd)

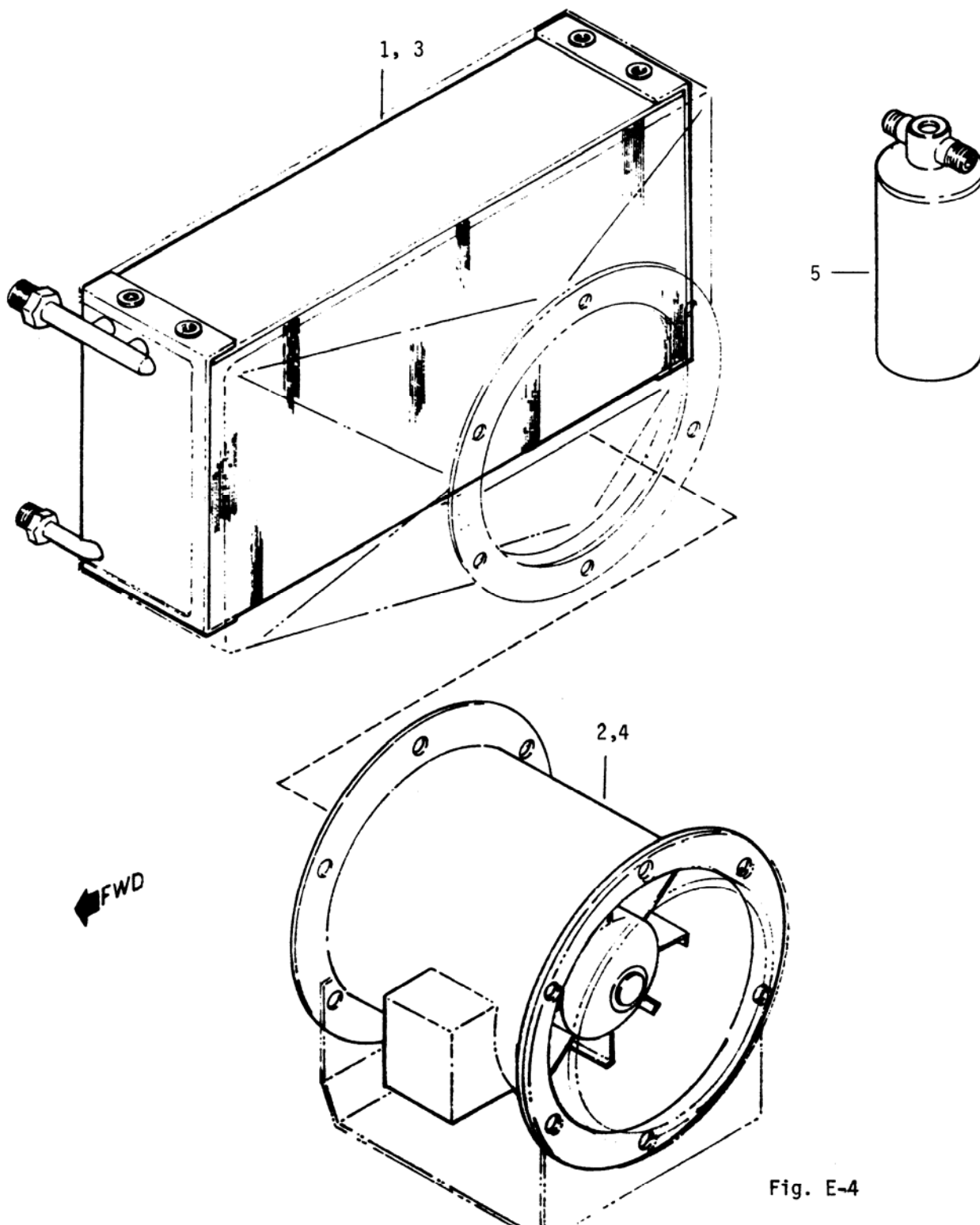


Fig. E-4

COMPRESSOR INSTALLATIONS (cont'd)

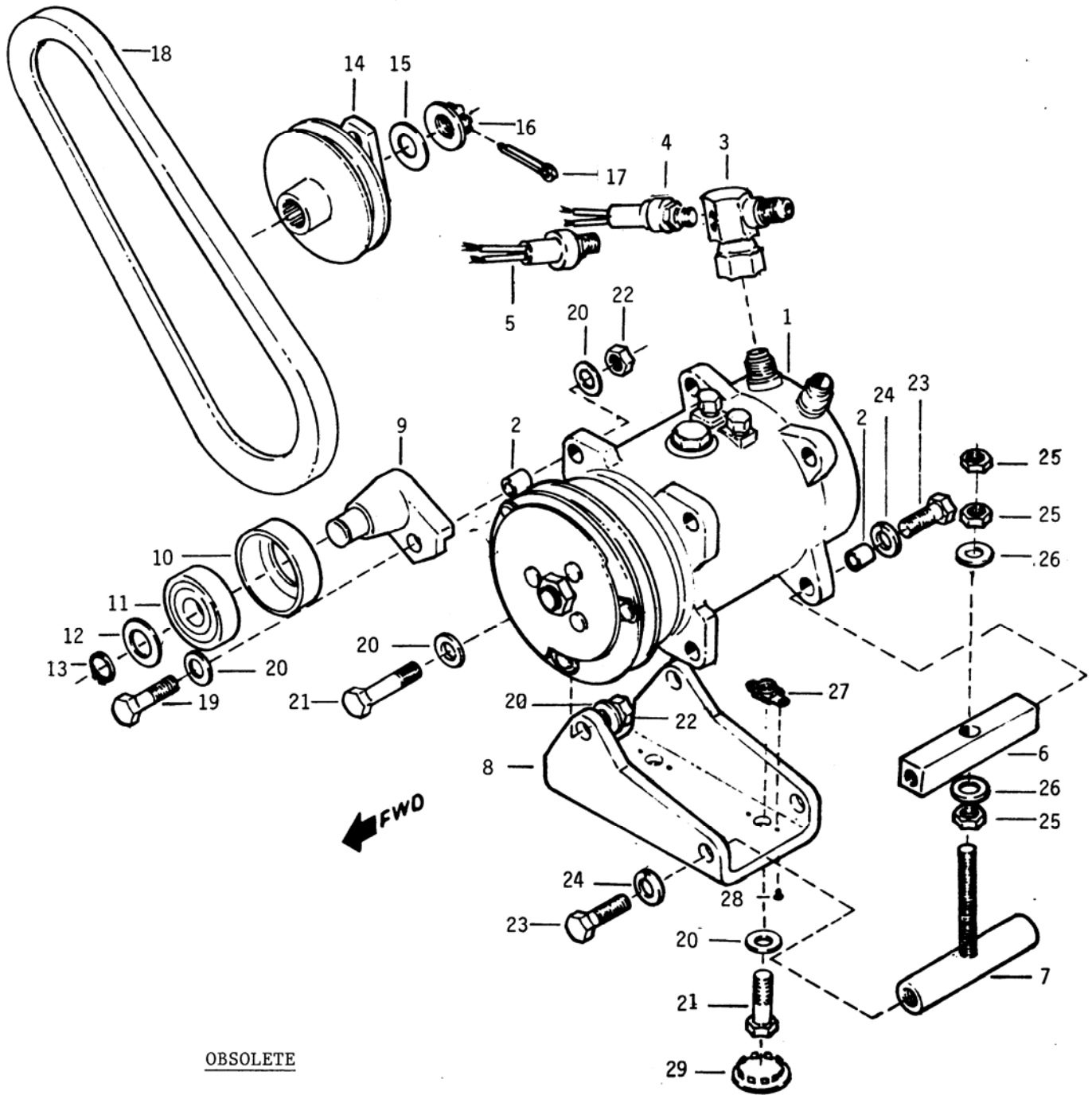


Fig. E-6

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

COMPRESSOR INSTALLATIONS (cont'd)

Figure Index No.	Part Number	Description	Units Per Install.
E-6	206-0400-3	Compressor Installation	Ref.
1	JBS 197-1	Compressor Assy.	1
2	JBS 456-4	Spacer	5
3	JBS 185-4	Elbow (Note 1 and 4)	1
4	ES 57008-2 *	Low Pressure Switch (Note 1 and 4)	1
5	ES 57008-4 *	High Pressure Switch (Note 1 and 4)	1
6	JBS 806-2	Adj. Brkt.	1
7	206-0402-1	Lower Support	1
8	206-0401-1	Comp. Mount (Note 2)	1
9	206-1453-1	Idler Brkt. (Note 3)	1
10	206-1454-1	Guide, Belt (Note 3)	1
11	ES 21046-3	Bearing (Note 3)	1
12	ES 38111-1	Support Washer (Note 3)	1
13	MS 16628-78	Snap Ring Bowd (Note 3)	1
14	206-1401-4	Adapter Pulley	1
15	206-1415-1	Washer	1
16	206-1421-1	Nut	1
17	MS 24665-285	Cotter Pin	1
18	ES 20032-1 *	Belt	1
19	AN 4-12A	Bolt	1
20	AN 960-416	Washer	10
21	AN 4-11A	Bolt	6
22	MS 21042-4	Nut	3
23	AN 4-5A	Bolt	2
24	AN 935-416	Lockwasher	4
25	AN 315-5	Nut	3
26	AN 960-516	Washer	2
27	MS 521059-L4	Nut, Plate	4
28	AN 426AD3-7	Rivet	8
29	ES 39009-1	Plug, Hole	4

* Recommended Spare Part

Note 1: Included in JBS 596-3 Press Switch Assy.
 Note 2: Includes four (4) MS 21059-L4 Nuts, Plate
 Note 3: Included in 206-0452-1 Idler Assy.
 Note 4: JBS2020-8 supersedes items 3, 4 and 5.

COMPRESSOR INSTALLATIONS (cont'd)

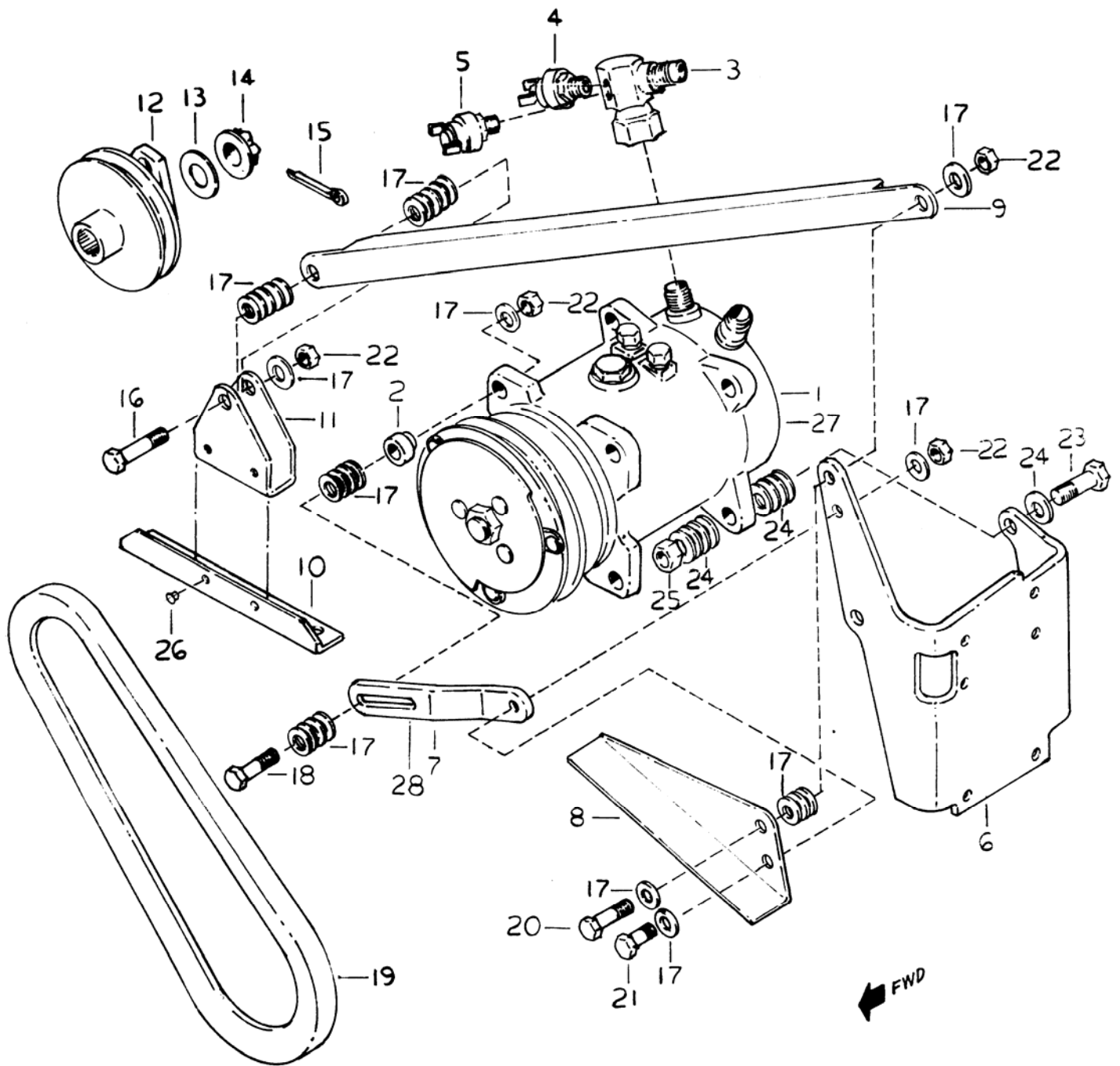


FIG. 1

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

COMPRESSOR INSTALLATIONS (cont'd)

Figure Index No.	Part Number	Description	Units Per Install.
E-7	206-0403-1	Compressor Installation	Ref.
1	JBS 197-3	Compressor Assy. (Note 1)	1
2	206-1455-1	Spacer	1
3	JBS 185-4	Elbow (Notes 2, 4 & 5)	1
4	ES 57008-2 *	Low Pressure Switch (Notes 2, 4 & 5)	1
5	ES 57008-4 *	High Pressure Switch (Notes 2, 4 & 5)	1
6	206-1424-1	Compressor Mount	1
7	206-1425-1	Link, Comp. Adj.	1
8	206-1460-1	Belt Guard	1
9	206-1469-1	Strut	1
10	206-1457-1	Angle	1
11	206-1456-1	Bracket	1
12	206-1401-6	Adapter Pulley	1
13	206-1415-1	Washer	1
14	206-1421-1	Nut	1
15	MS 24665-285	Cotter Pin	1
16	AN 4-12A	Bolt	1
17	AN 960-416	Washer	27
18	AN 4-21A	Bolt	1
19	ES 20033-4 *	Belt	1
20	AN 4-10A	Bolt	1
21	AN 4-7A	Bolt	1
22	MS 21042-4	Nut	4
23	AN 6-16A	Bolt	2
24	AN 960-616	Washer	16
25	MS 21042-6	Nut	2
26	AN 470AD4-6	Rivet ³	5
OBSOLETE	E-7	206-0403-2	Ref.
		Compressor Inst'l	
		(Same as -1 Inst'l except	
		for items 27 & 28	
OBSOLETE	27	JBS 204-2	1
OBSOLETE	28	206-1425-2	1
		Link Compressor Adj.	
* Recommended Spare Part			
NOTE 1: Includes 206-1455-1 Spacer			
NOTE 2: Included in JBS 596-3 Press. Switch Assy.			
NOTE 3: Alternate P/N for AN470AD4-6 is MS20470AD4-6)			
NOTE 4: On later instls. the ES57008-2 & -4 pressure switches were replaced by a single pressure switch with both functions (JBS2020-1).			
NOTE 5: JBS2020-8 supersedes JBS2020-1 and JBS596-3.			

COMPRESSOR INSTALLATIONS (cont'd)

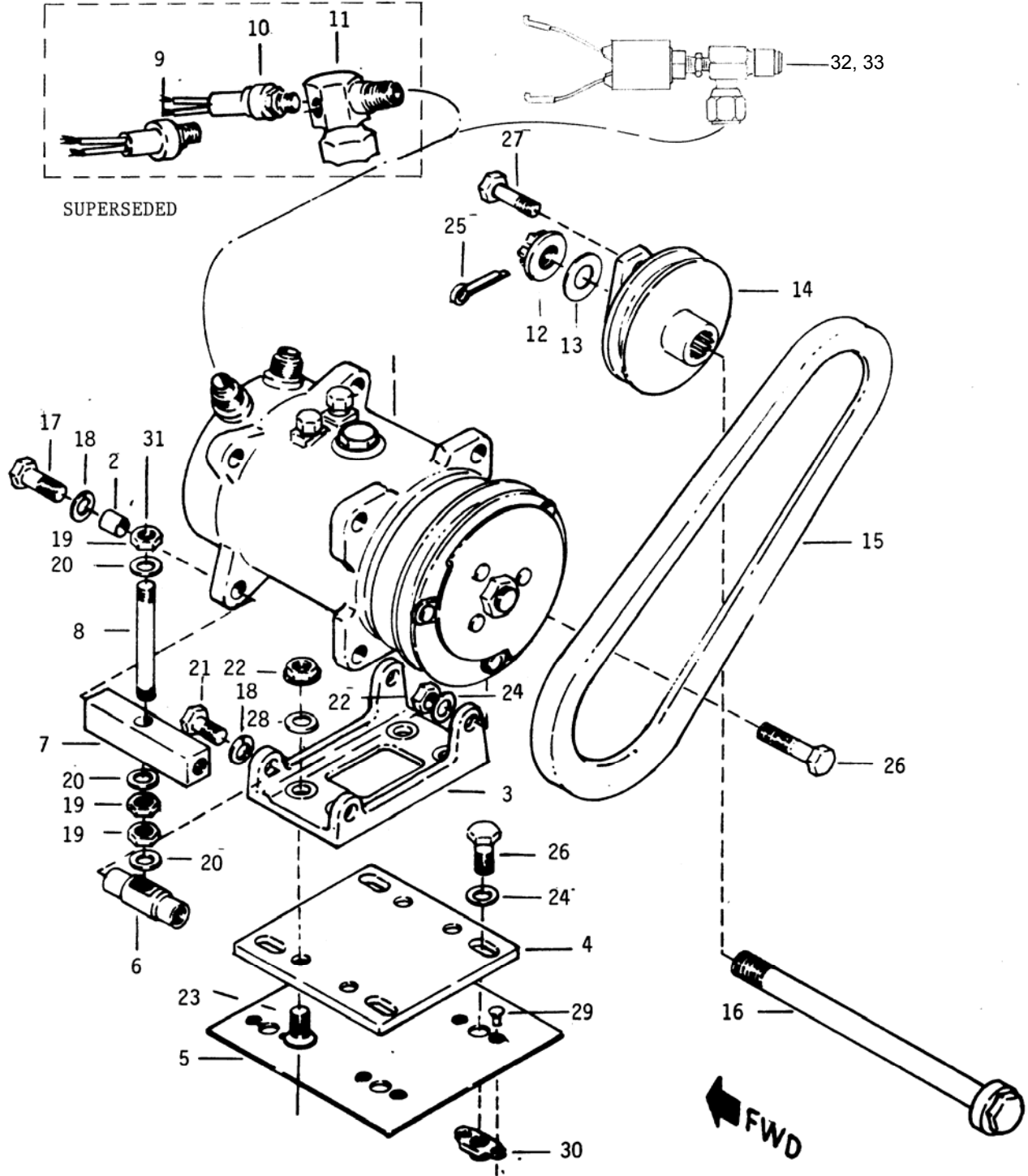


Fig. E-8

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

COMPRESSOR INSTALLATION (Cont'd)

Figure Index No.	Part Number	Description	Units Per Install.
E-8	206-0404-1, 0405-1	Compressor Install (Rigid)	Ref.
1	JBS197-5	Compressor Assy. (Note 1 & 4)	1
2	JBS456-4	Spacer	4
3	JBS805-2	Compressor Mount	1
4	206-1466-1	Adapter Plate	1
5	206-0455-1	Attach Plate Assy. (Note 2)	1
6	JBS806-3	Adj. Support	1
7	JBS806-2	Adj. Brkt.	1
8	JBS59-7	Stud	1
9	ES57008-2*	Low Pressure Switch (Note 3 & 5)	1
10	ES57008-4*	High Pressure Switch (Note 3 & 5)	1
11	JBS185-2	Elbow (Note 3 & 5)	1
12	206-1421-1	Nut	1
13	206-1415-1	Washer	1
14	206-1401-5	Adapter Pulley	1
15	ES20033-27*	Belt	1
16	206-1470-1	Bolt	1
17	AN4-10A	Bolt	2
18	AN935-416	Washer	4
19	AN315-5R	Nut	2
20	AN960-516	Washer	3
21	AN4-6A	Bolt	2
22	MS21042-4	Nut	2
23	AN509-416R9	Screw	4
24	AN960-416	Washer	12
25	MS24665-285	Cotton Pin	1
26	AN4-11A	Bolt	4
27	206-1417-1	Bolt	2
28	AN960-416L	Washer	4
29	MS20426AD3-3	Rivet	8
30	MS21059L4	Nut Plate	4
31	MS21042-5	Nut	1
32	JBS2020-1	Pressure Switch (Note 5)	1
33	JBS2020-8	Pressure Switch (Note 5)	1
* Recommended Spare Part			
Note 1: Includes four (4) JBS456-4 Spacer			
Note 2: Includes four (4) MS21059L4 Nut Plates			
Note 3: included in JBS596-2 Pressure Switch Assy.			
Note 4: New P/N replaces JBS197-4 after 6-19-86.			
Note 5: JBS2020-8 supersedes JBS596-2 (Items 9, 10 & 11) and JBS2020-1 (Item 32).			

E-14

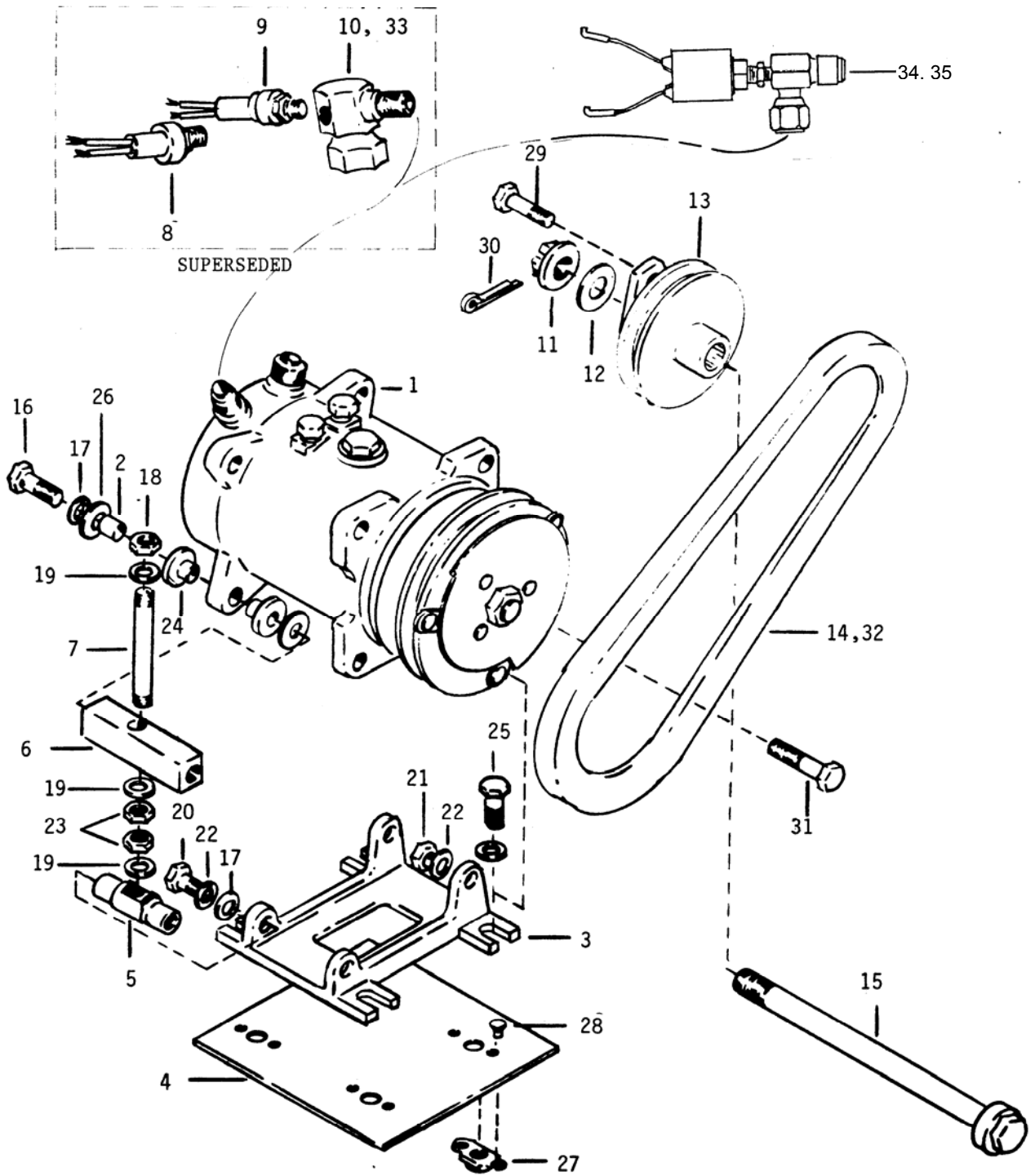


Fig. E-9

ILLUSTRATED PARTS CATALOG – 206B, L-3

Figure Index No.	Part Number	Description	Units Per Assy.
E-9	206-0404-1, 0405	Compressor Inst.	1
	-1, 0406-1	(Isolated)	
1	JBS197-5	Compressor Inst.	1
		(Note 1)	
2	JBS197-6960	Spacer	4
3	JBS823-1	Compressor Mount	1
4	206-0455-1	Attach Plate Assy.	1
		(Note 2)	
5	JBS806-5	Adjust Support	1
6	JBS806-4	Adjust Bracket	1
7	JBS59-7	Stud	1
8	ES57007-2	Low Pressure Switch	1
		(Notes 3, 8 & 11)	
9	ES57007-4	High Pressure Switch	1
		(Notes 3, 9 & 11)	
10	JBS185-4	Elbow (Notes 3, 6 & 11)	1
11	206-1421-1	Nut	1
12	206-1415-1	Washer	1
13	206-1401-5	Adapter Pulley	1
14	ES20033-34	V-Belt (note 4)	1
15	206-1470-1	Bolt (note 10)	2
16	AN4-13A	Bolt	2
17	AN935-416	Lockwasher	4
18	MS21042-5	Nut	1
19	AN960-516	Washer	3
20	AN4-6A	Bolt	2
21	MS21042-4	Nut	2
22	AN960-416	Washer	12
23	AN315-5R	Nut	2
24	JBS364-2	Bushing, Isolation	8
25	AN4-11A	Bolt	4
26	214-1410-1	Washer	8
27	MS21059L4	Nut, Plate	4
28	MS20426AD3-3	River	8
29	206-1417-1	Bolt	2
30	MS24665-285	Cotton Pin	1
31	AN4-15A	Bolt	2
32	ES20033-29	V-Belt (Note 5)	1
33	JBS185-2	Elbow (Notes 7 & 11)	1
34	JBS2020-1	Pressure Switch (Note 12)	1
35	JBS2020-8	Pressure Switch (Note 12)	1

Note 1: Includes four (4) JBS197-6 spacers, eight (8) JBS364-2 Isolation Bushings.

Note 2: Included four (4) ES34079-1 Nut, Plate.

Note 3: Included in pressure switch assy. JBS596-3

Note 4: Used on 206-L3 only.

Note 5: Used on 206-B only.

Note 6: Used on 206-0406.

Note 7: Used on 206-0404, 206-0405.

Note 8: For replacement part, order JBS570-2.

Note 9: For replacement part, order JBS570-4.

Note 10: For replacement part, order 206-1434-1.

Note 11: JBS2020-1 supersedes item 8, 9, 10, & 33.

Note 12: JBS2020-8 supersedes JBS596-3 (Items 8, 9, 10, & 33) and JBS2020-1 (Item 34).

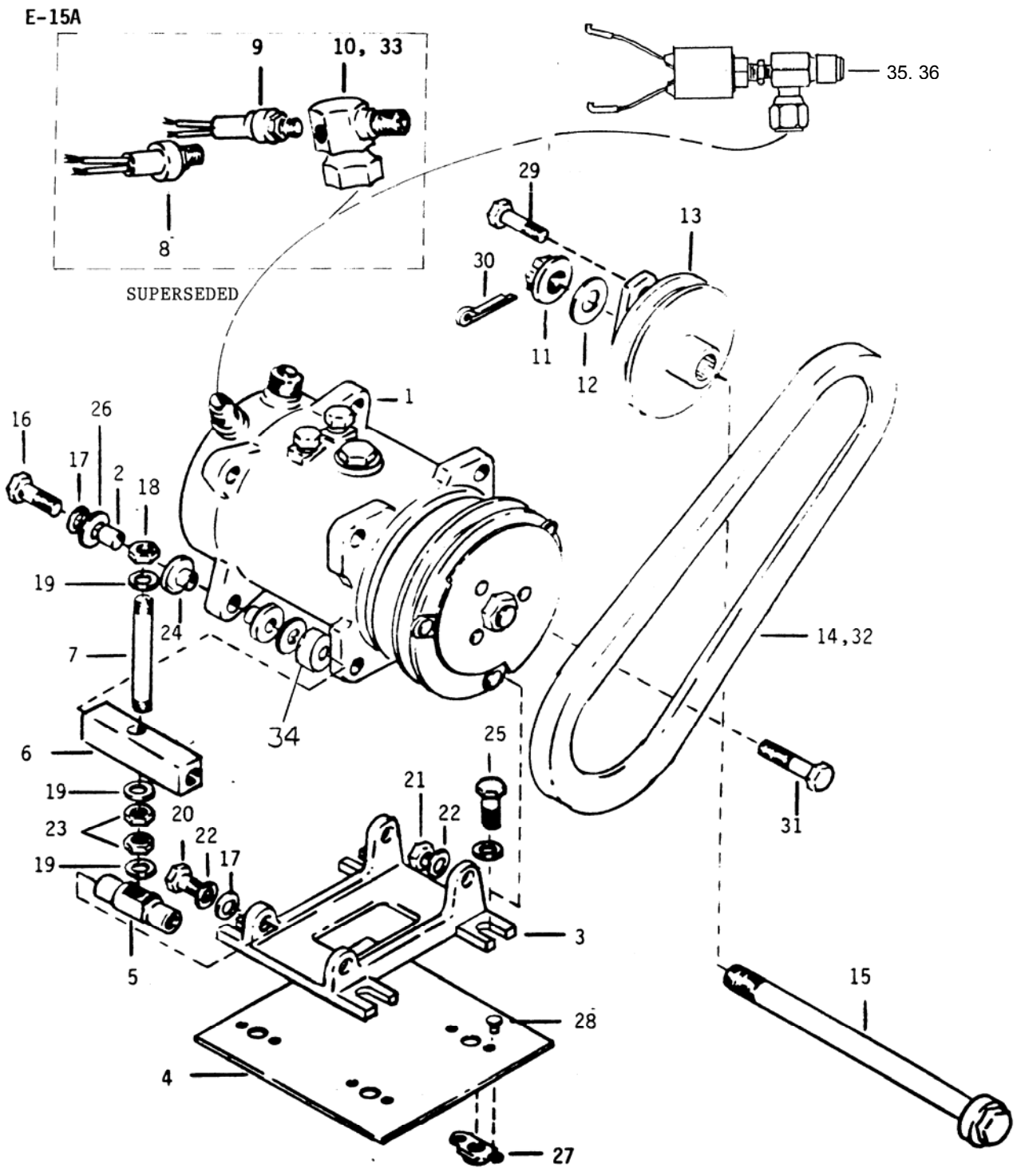


Fig. E-9A

ILLUSTRATED PARTS CATALOG – 206B, L-3

Figure Index No.	Part Number	Description	Units Per Assy.
E-9A	206-0405-2	Compressor Inst.	1
	0406-2	(Isolated)	
1	JBS204-1	Compressor Assy. (Note 1)	1
2	JBS204-12	Spacer	4
3	JBS823-1	Compressor Mount	1
4	206-0455-1	Attach Plate Assy. (Note 2)	1
5	JBS806-5	Adjust Support	1
6	JBS806-6	Adjust Bracket	1
7	JBS59-7	Stud	1
8	ES57007-2	Low Pressure Switch (Notes 3,7,9)	1
9	ES57007-4	High Pressure Switch (Notes 3,8,9)	1
10	JBS185-4	Elbow (Notes 3,6,9)	1
11	206-1421-1	Nut	1
12	206-1415-1	Washer	1
13	206-1401-5	Adapter Pulley	1
14	ES20033-34	V-Belt (note 4)	1
15	206-1434-1	Bolt	2
16	AN4-16A	Bolt	2
17	AN935-416	Lockwasher	4
18	MS21042-5	Nut	1
19	AN960-516	Washer	3
20	AN4-6A	Bolt	2
21	MS21042-4	Nut	2
22	AN960-416	Washer	8
23	AN315-5	Nut	2
24	JBS364-2	Bushing, Isolation	8
25	AN4-11A	Bolt	4
26	214-1410-1	Washer	8
27	MS21059L4	Nut, Plate	4
28	MS20426AD3-3	Rivet	8
29	206-1417-1	Bolt	2
30	MS24665-285	Cotton Pin	1
31	AN4-15A	Bolt	2
32	ES20033-29	V-Belt (Note 5)	1
33	JBS185-2	Elbow (Note 9)	1
34	206-1436-1	Spacer	2
35	JBS2020-1	Pressure Switch (Note 9)	1
36	JBS2020-8	Pressure Switch (Note 9)	1

- Note 1: Includes four (4) JBS204-12 spacers, eight (8) JBS364-2 Isolation Bushings.
- Note 2: Included four (4) MS21059L4 Nut, Plate.
- Note 3: Included in pressure switch assembly.
- Note 4: Used on 206-L3 only.
- Note 5: Used on 206-B only.
- Note 6: Used on 206-0406.
- Note 7: For replacement part, order JBS570-2.
- Note 8: For replacement part, order JBS570-4.
- Note 9: JBS2020-8 supersedes JBS596-3 (Items 8, 9, 10 & 33) and JBS2020-1 (Item 34).

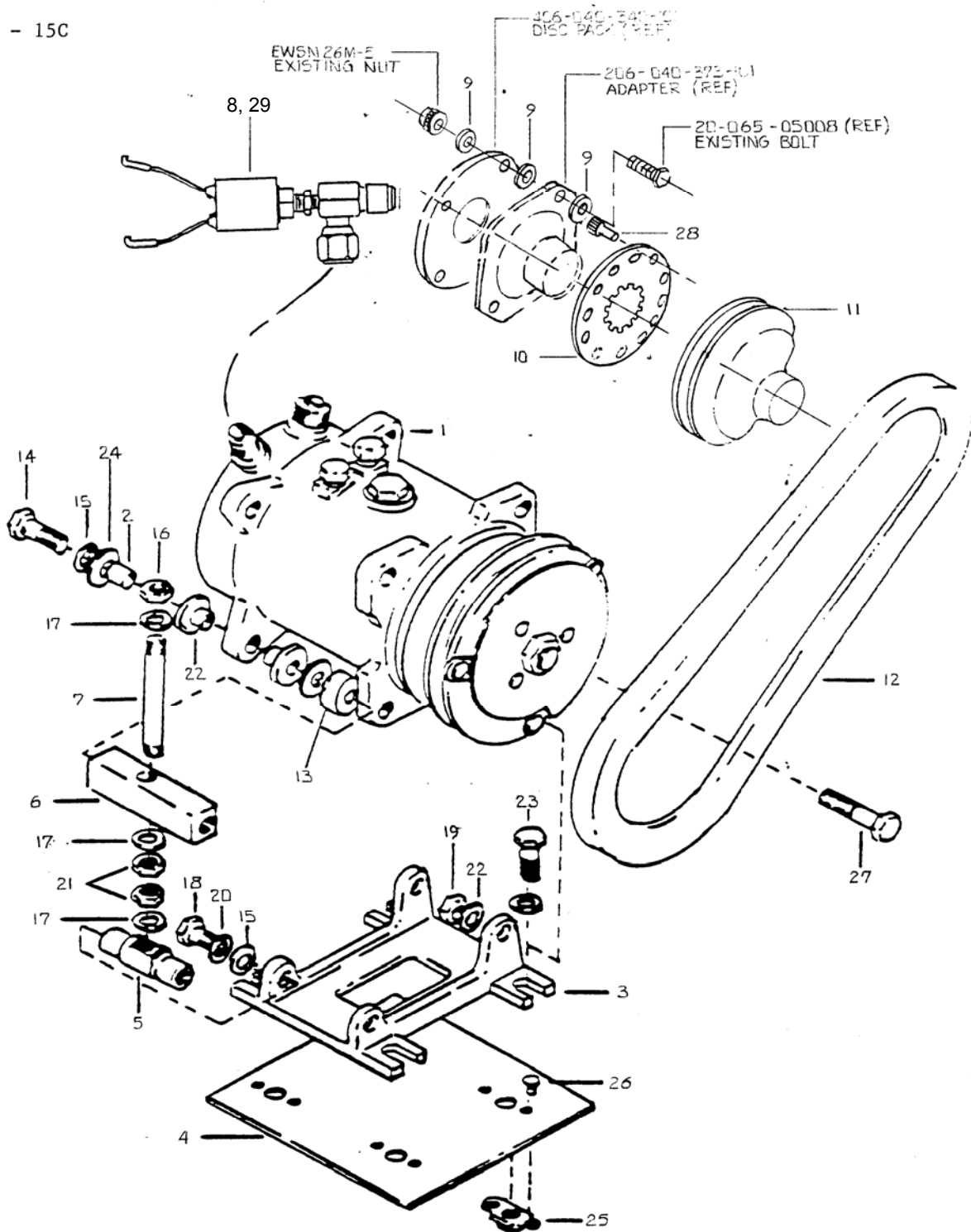


FIG. E-9B

ILLUSTRATED PARTS CATALOG – 206B, L-3

Figure Index No.	Part Number	Description	Units Per Assy.
E-9B	206-0406-3	Compressor Inst. (Isolated)	1
1	JBS204-1	Compressor Assy. (Note 1)	1
2	JBS204-12	Spacer	4
3	JBS823-1	Compressor Mount	1
4	206-0455-1	Attach Plate Assy. (Note2)	1
5	JBS806-5	Adjust Support	1
6	JBS806-6	Adjust Bracket	1
7	JBS59-7	Stud	1
8	JBS2020-1	Pressure Switch Assy. (Note 3)	1
9	JBS15005-3	Washer	12
10	JBS15005-1	Splined Internal Ring	1
11	JBS15005-2	Pulley	1
12	ES20033-34	V-Belt	1
13	206-1436-1	Spacer	2
14	AN-16A	Bolt	2
15	AN935-416	Lockwasher	4
16	MS21042-5	Nut	1
17	AN960-516	Washer	3
18	AN4-6A	Bolt	2
19	MS21042-4	Nut	2
20	AN960-416	Washer	8
21	AN315-5	Nut	2
22	JBS364-2	Bushing, Isolation	8
23	AN4-11A	Bolt	4
24	214-1410-1	Washer	8
25	MS21059L4	Nut, Plate	4
26	MS20426AD3-3	Rivet	8
27	AN4-15A	Bolt	2
28	NAS1351-3H6	Socket Head Screw	4
29	JBS2020-8	Pressure Switch (Note 3)	1

Note 1: Includes four (4) JBS204-12 spacers, eight (8) JBS364-2 Isolation Bushings.

Note 2: Included four (4) MS21059L4 Nut, Plate.

Note 3: JBS2020-8 supersedes JBS2020-1.

ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

FORWARD BLOWER INSTALLATIONS

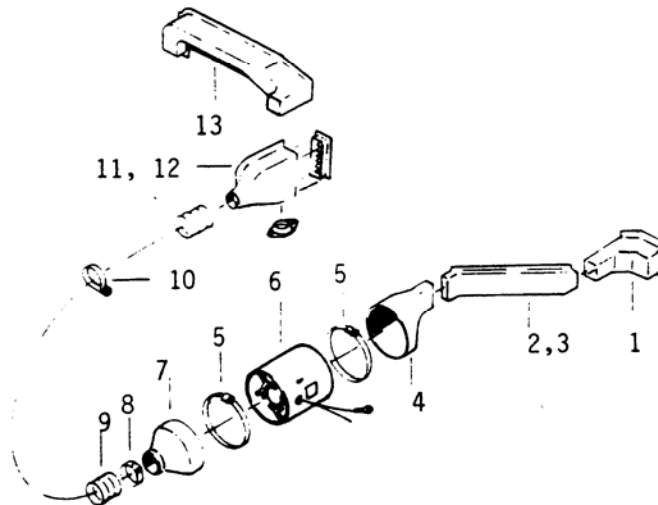
INACTIVE

Fig. E -11

INACTIVE

Figure Index No.	Part Number	Description	Units Per Install.
E-11	206-0602-1	Forward Blower Installation	Ref.
1	206-1613-1	Duct Assy.	1
2	206-1617-1	Duct Assy., L.H.	1
3	206-1617-2	Duct Assy., R.H.	1
4	206-1616-1	Duct Assy.	2
5	JBS 818-3	Clamp	4
6	ES 73073-1	Blower	2
7	206-1615-1	Duct	2
8	JBS 818-2	Clamp	2
9	206-1680-7	Duct	2
10	JBS 818-1	Clamp	2
11	206-1619-1	Duct Assy., L.H. (Note 1)	1
12	206-1619-2	Duct Assy., R.H. (Note 1)	1
13	206-1614-1	Duct Assy.	1

Note 1: Includes Air Outlets

ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

FORWARD BLOWER INSTALLATIONS (cont't)

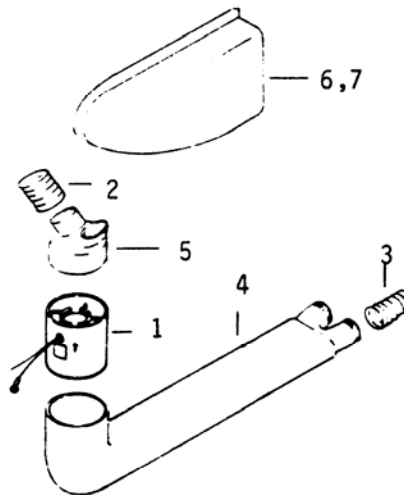
INACTIVE

Fig. E -10

INACTIVE

Figure Index No.	Part Number	Description	Units Per Install.
E-10	206-0601-1	Forward Blower Installation	Ref.
1	ES 73073-1	Blower	1
2	206-1860-6	Duct	2
3	206-1860-7	Duct	2
4	206-1664-1	Duct Assy.	1
5	206-1666-1	Adapter	1
6	206-1670-2	Outlet Assy. - L.H.	1
7	206-1667-2	Outlet Assy. - R.H.	1

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (Cont'd.)

CABIN AIR DISTRIBUTION SYSTEM INSTALLATIONS (Cont'd.)

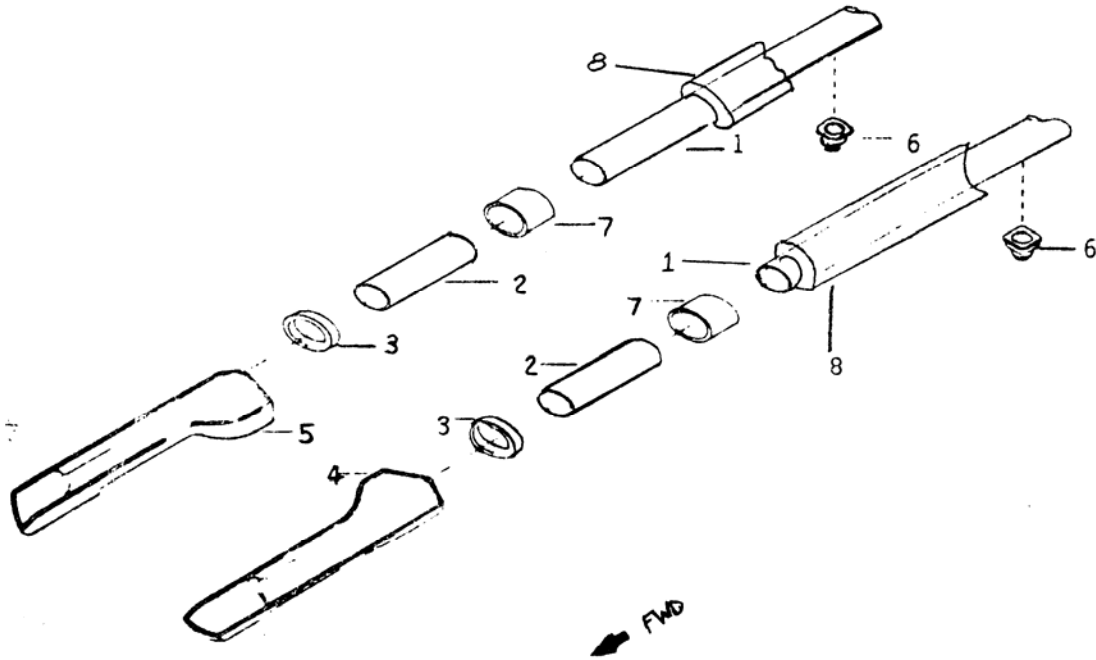


Fig. E-12

Figure Index No.	Part Number	Description	Units Per Install.
E-12	206-0612-1, -2	Cabin Air Distribution System Installation (A/C Only)	Ref.
1	206-1625-3	Overhead Duct.	2
2	206-1639-1	Bulkhead Feed-through Duct.	2
3	206-1643-1	Gasket	2
4	206-0659-1	Air Outlet Duct Assembly, L.H.	NOTE: 1
4	206-0659-3	Air Outlet Duct Assembly, L.H.	NOTE: 2
5	206-0659-2	Air Outlet Duct Assembly, R.H.	NOTE: 1
5	206-0659-4	Air Outlet Duct Assembly, R.H.	NOTE: 2
6	JBS 816-1	Air Outlet Assembly	2
7	ES70001-10	Coupling	2
8	JBS 20-1	Installation Tubing	2

NOTE: 1 For 206L, L1 & 206B (Prior to S/N 3567)

NOTE: 2 For 206L3 & 206B (After S/N 3567).

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

CABIN AIR DISTRIBUTION SYSTEM INSTALLATIONS (cont'd)

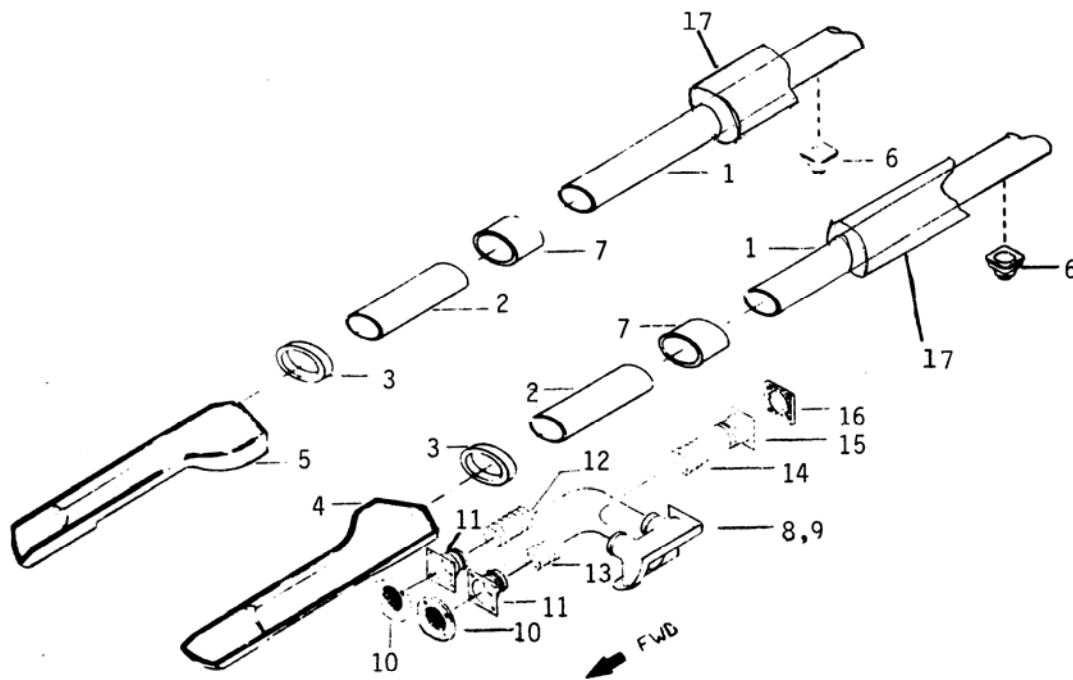


Fig. E - 13

Figure Index No.	Part Number	Description	Units per Install.
E-13	206-0612-1 or -2 with -3	Cabin Air Distribution System Installation (ECS)	Ref.
1	206-1625-3	Overhead Duct	2
2	206-1639-1	Bulkhead Feed-through Duct	2
3	206-1643-1	Gasket	2
4	206-0659-1	Air Outlet Duct Assy, L.H.	1
5	206-0659-2	Air Outlet Duct Assy, R.H.	1
6	JBS 816-1	Air Outlet Assy.	2
7	ES70001-10	Coupling	2
8	206-0660-1	Plenum Assy, L.H.	1
9	206-0660-2	Plenum Assy, R.H.	1
10	206-0662-1	Air Outlet Assy	4
11	206-1658-1	Adapter	4
12	206-1860-7	Duct	2
13	206-1860-9	Duct	2
14	206-1860-10	Duct	2
15	206-1658-2	Adapter	2
16	206-0660-1	Air Outlet Assy	2
17	JBS20-1	Insulation Tubing	

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

CABIN AIR DISTRIBUTION SYSTEM INSTALLATIONS

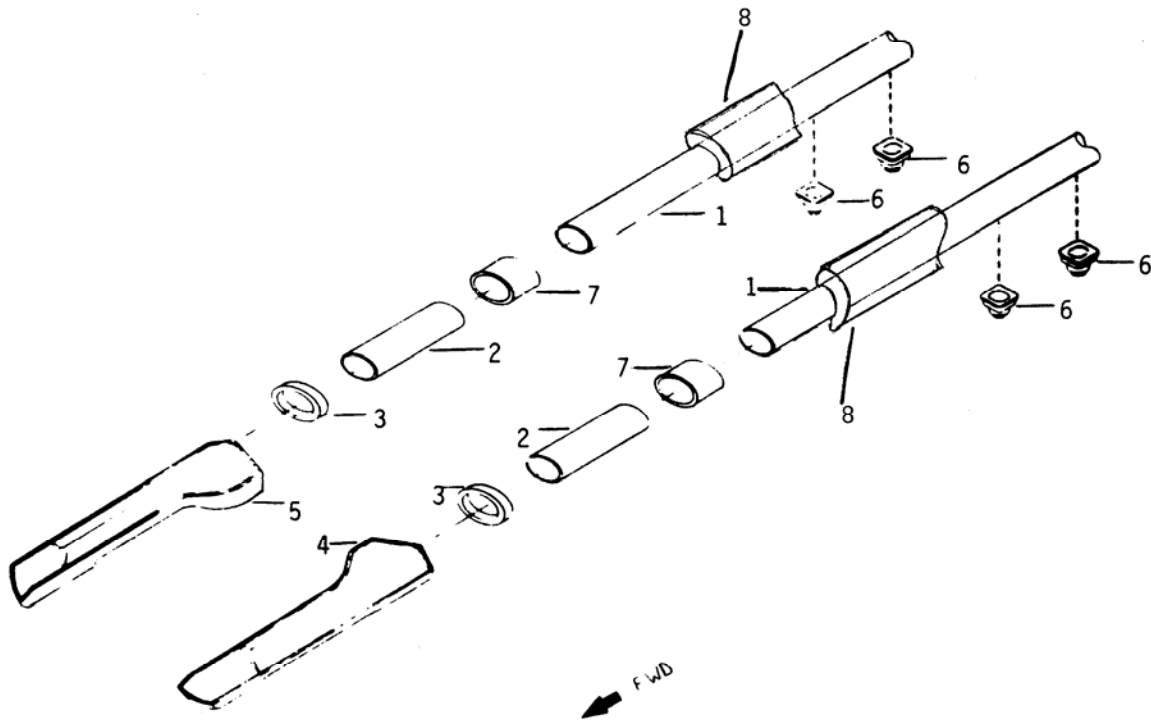


Fig. E -14

Figure Index No.	Part Number	Description	Units Per Install.
E-14	206-0614-1,-2	Cabin Air Distribution System Installation	Ref.
1	206-1625-2	Overhead Duct	2
2	206-1639-1	Bulkhead Feed-through Duct	2
3	206-1643-1	Gasket	2
4	206-0659-1	Air Outlet Duct Assy., L.H.	1
5	206-0659-2	Air Outlet Duct Assy., R.H.	1
6	JBS 816-1	Air Outlet Assy.	4
7	ES70001-10	Coupling	2
8	JBS20-2	Insulation Tubing	2

E-20A

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E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

ELECTRICAL INSTALLATIONS

Figure Index No.	Part Number	Description	Units Per Install.
E-15	206-0700-1	Electrical Installation	Ref.
E-15	206-0700-3	Electrical Installation	Ref.
E-15	206-0700-5	Electrical Installation	Ref.
1	206-0701-1	Plate, Mtg.	Ref.
2	ES 56128-1 *	Relay	1
3	ES 62117-1	Temp. Controller	1
4	ES 56149-1 *	Relay	1
5	ES 63014-7 *	Resistor	1
6	ES 51061-1	Fuse Holder	1
7	JBS 64-2 *	Fuse, 5A	1
8	ES 57016-5	Switch	1
9	ES 57016-8	Switch	1
10	ES 62114-1 *	Rheostat	1
11	206-0160-2	Panel (206-0700-5)	1
11	206-1704-2	Panel (for 206-0700-3 and alt. for 206-0700-1)	1
12	ES 59118-1	Knob	1
13	JBS 75-8	Circuit Breaker - 30A, "FAN"	1
14	ES 63014-3 *	Resistor	1
15	JBS 75-1 *	Circuit Breaker - 2A	1
16	JBS75-28	Circuit Breaker - 35A, "A/C"	1
* Recommended Spare Part			

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
 ELECTRICAL INSTALLATIONS (cont'd)

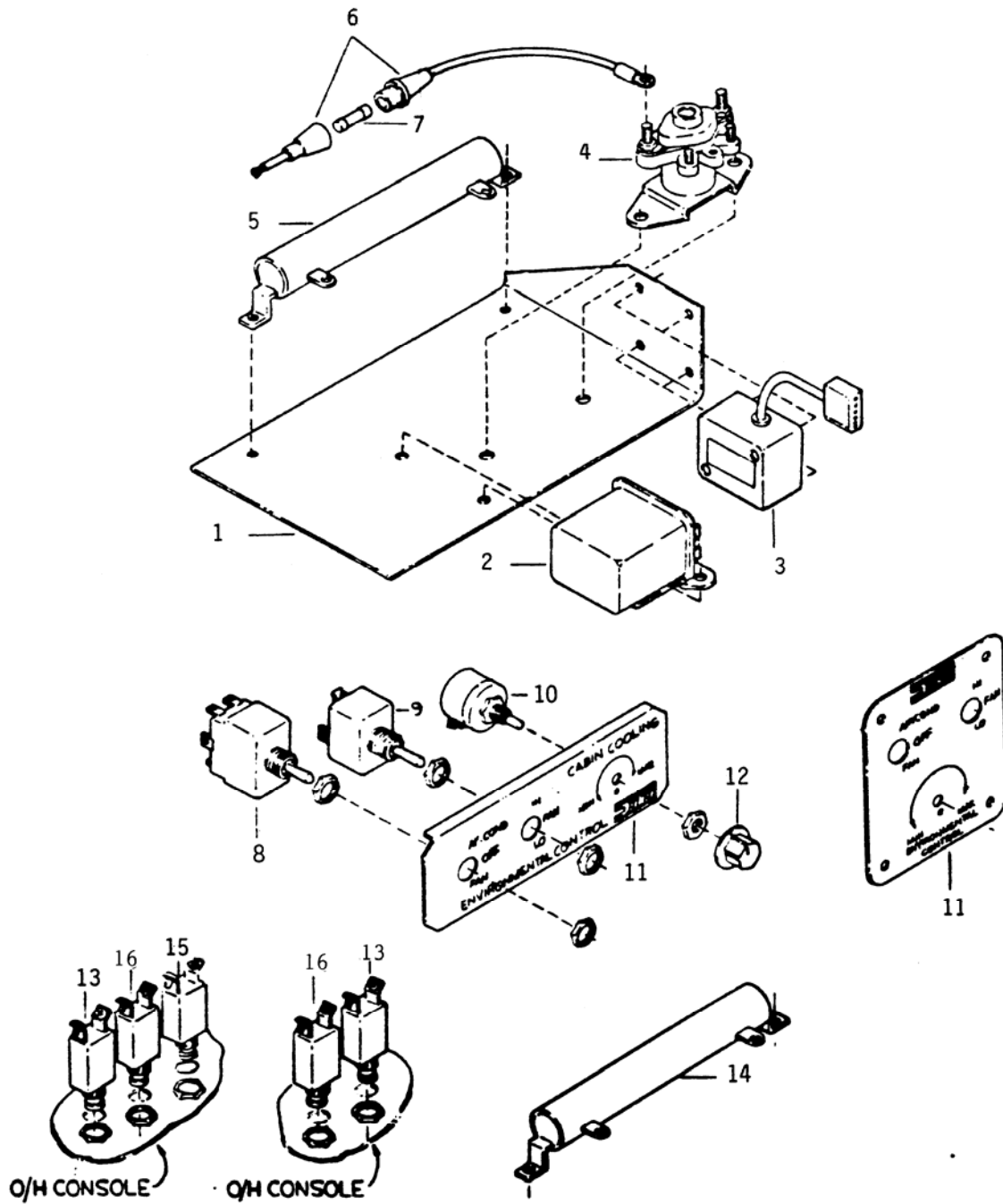


Fig. E-15

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

PLUMBING INSTALLATIONS (cont'd)

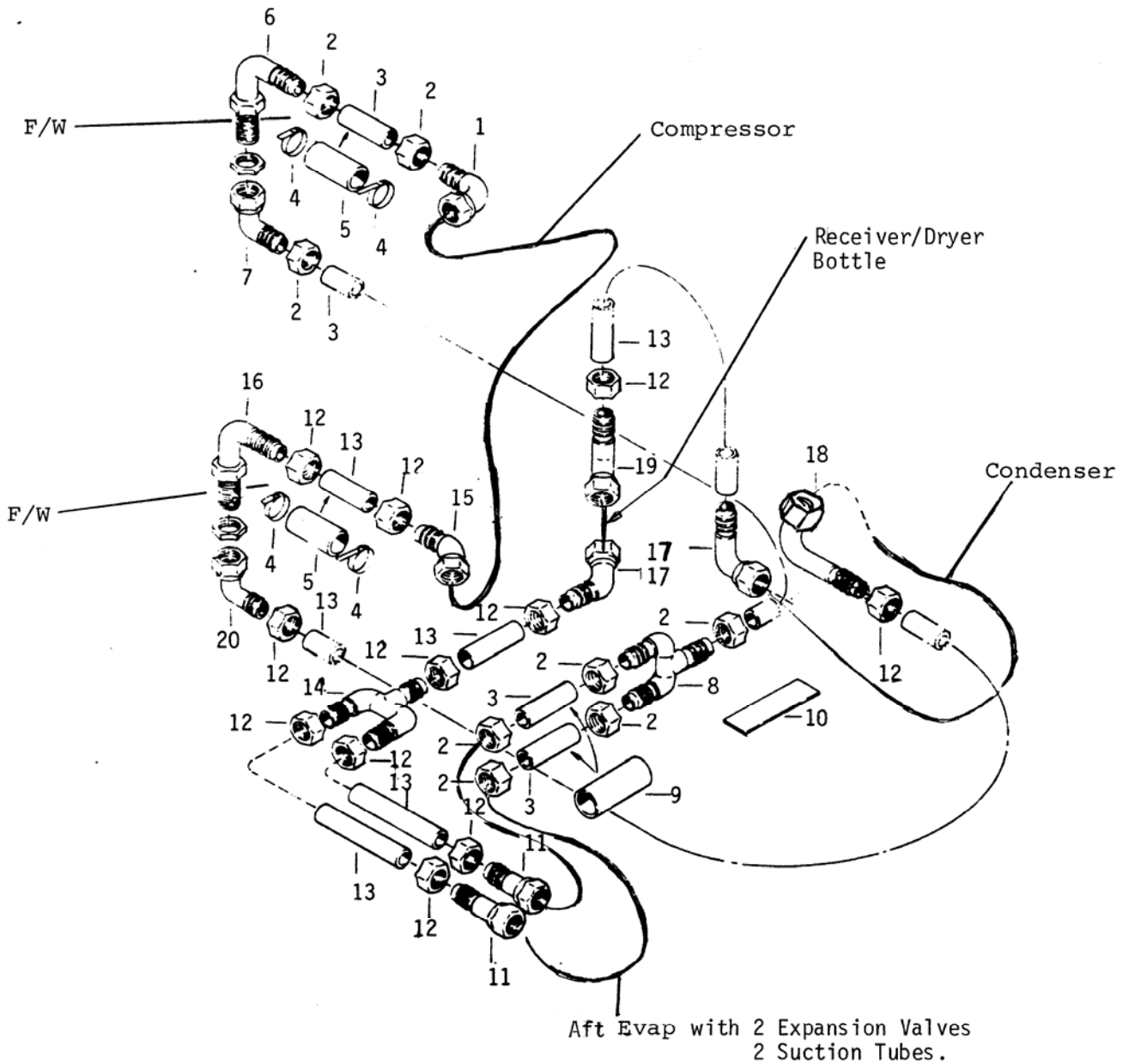



Fig. E-16


E . ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

PLUMBING INSTALLATIONS (cont'd)

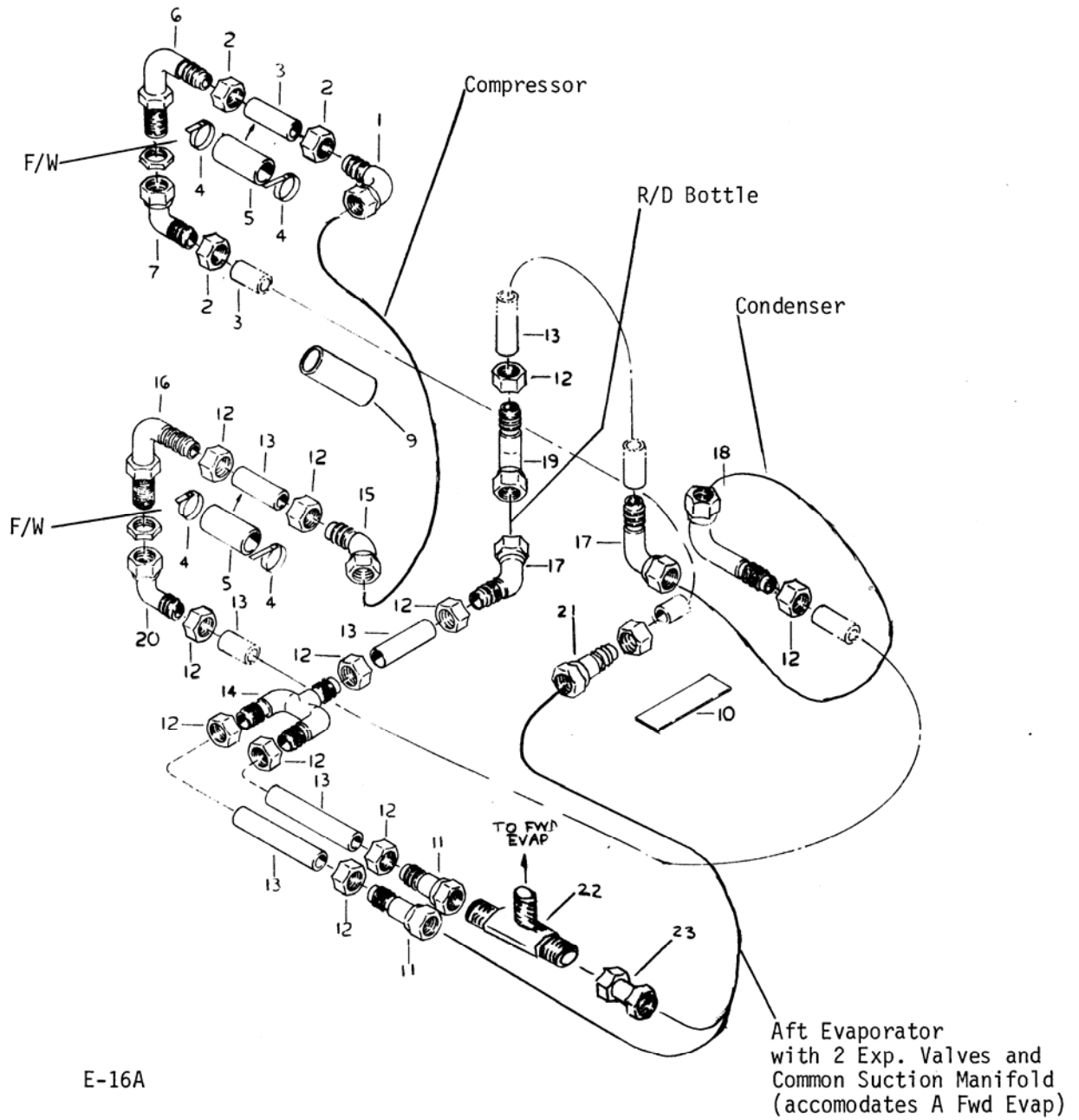
Figure Index No.	Part Number	Description	Units Per Install.
E-16 	206-0750-3	Plumbing Installation	Ref.
1	ES 40027-6	Elbow, 90°	1
2	ES 40020-4 *	Socket (Note 1)	8
3	ES 48145-4 *	Hose (Note 1)	90"
4	ES 30072-1 *	Clamp (Note 1)	4
5	ES 02126-2 *	Fire Sleeve (Note 1)	48"
6	ES 40028-4	Bulkhead Fitting w/Nut - 90°	1
7	ES 40025-4	Elbow, 90°	1
8	ES 41023-4	"Y" Fitting	1
9	ES 02162-3 *	Tube, Insulating (Note 1)	72"
10	ES 06022-1 *	Tape, Insulation (Note 1)	18"
11	ES 40022-4	Fitting, Straight	2
12	ES 40020-2 *	Socket (Note 1)	12
13	ES 48145-2 *	Hose (Note 1)	90"
14	ES 41023-2	"Y" Fitting	1
15	ES 40034-2	Elbow, 45°	1
16	ES 40028-2	Bulkhead Fitting w/Nut	1
17	ES 40024-1	Elbow, 45°	2
18	ES 40025-2	Fitting, 90°	1
19	ES 40027-1	Fitting, 90°	1
20	ES 40025-2	Fitting, 90°	1

* Recommended Spare Part

Note 1: Total amount required/installation - order actual length required for individual location replacement.

 Fig. E-16 is for AFT EVAPORATORS with 2 Expansion Valves and 2 Suction Tubes.

E-24A
 E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (Cont'd)
 PLUMBING INSTALLATIONS (Cont'd)






E-16A

E . ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

E-24B

PLUMBING INSTALLATIONS (cont'd)

Figure Index No.	Part Number	Description	Units Per Install.
E-16A 	206-0750-3	Plumbing Installation	Ref.
1	ES 40027-6	Elbow, 90°	1
2	ES 40020-4 *	Socket (Note 1)	8
3	ES 48145-4 *	Hose (Note 1)	90"
4	ES 30072-1 *	Clamp (Note 1)	4
5	ES 02126-2 *	Fire Sleeve (Note 1)	48"
6	ES 40028-4	Bulkhead Fitting w/Nut - 90°	1
7	ES 40025-4	Elbow, 90°	1
9	ES 02162-3 *	Tube, Insulating (Note 1)	72"
10	ES 06022-1 *	Tape, Insulation (Note 1)	18"
11	ES 40022-4	Fitting, Straight	2
12	ES 40020-2 *	Socket (Note 1)	8
13	ES 48145-2 *	Hose (Note 1)	90"
14	ES 41023-2	"Y" Fitting	1
15	ES 40034-2	Elbow, 45°	1
16	ES 40028-2	Bulkhead Fitting w/Nut	1
17	ES 40024-1	Elbow, 45°	1
18	ES 40025-2	Fitting, 90°	1
19	ES 40024-1	Fitting, 45°	2
20	ES 40025-2	Fitting, 90°	1
21	ES 40022-6	Fitting Straight	1
22	ES 41019-2	Tee	1 
23	ES 42036-2	Swivel Nut Connector	1 

* Recommended Spare Part

Note 1: Total amount required/installation - order actual length required for individual location replacement.



FIG E-16A is effective for Aft Evaporators with 1 Expansion Valve and Suction Port.



Parts required for A/C with Fwd Evaporators.

E-24C E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
PLUMBING INSTALLATION (cont'd)

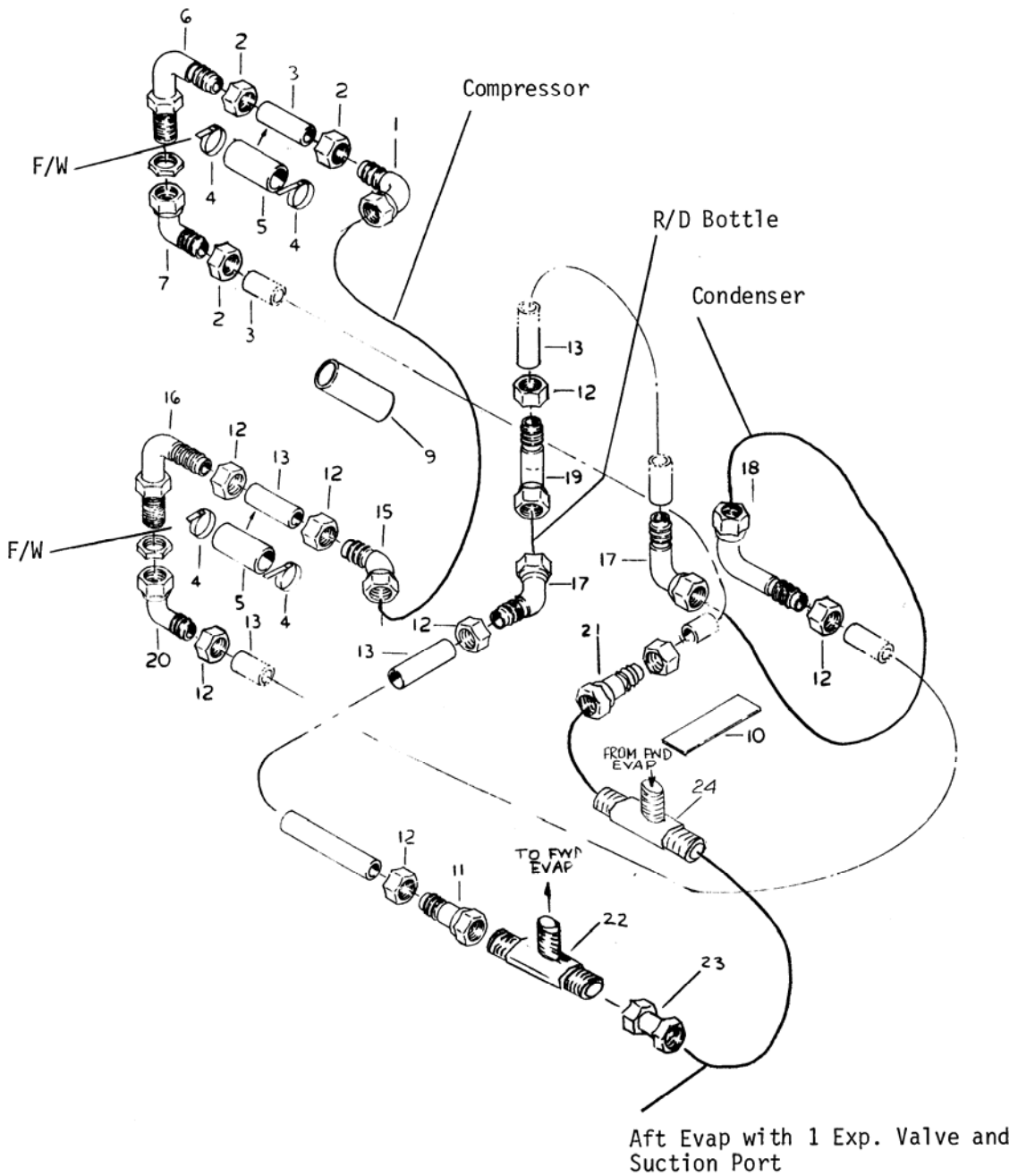






Fig. E-16B

E . ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

PLUMBING INSTALLATIONS (cont'd)

Figure Index No.	Part Number	Description	Units Per Install.
E-16B 	206-0750-3	Plumbing Installation	Ref.
1	ES 40027-6	Elbow, 90°	1
2	ES 40020-4 *	Socket (Note 1)	4
3	ES 48145-4 *	Hose (Note 1)	90"
4	ES 30072-1 *	Clamp (Note 1)	4
5	ES 02126-2 *	Fire Sleeve (Note 1)	48"
6	ES 40028-4	Bulkhead Fitting w/Nut - 90°	1
7	ES 40025-4	Elbow, 90°	1
			1
9	ES 02162-3 *	Tube, Insulating (Note 1)	72"
10	ES 06022-1 *	Tape, Insulation (Note 1)	54"
11	ES 40022-4	Fitting, Straight	1
12	ES 40020-2 *	Socket (Note 1)	8
13	ES 48145-2 *	Hose (Note 1)	90"
15	ES 40034-2	Elbow, 45°	1
16	ES 40028-2	Bulkhead Fitting w/Nut	1
17	ES 40024-1	Elbow, 45°	2
18	ES 40025-2	Fitting, 90°	1
19	ES 40027-1	Fitting, 90°	1
20	ES 40025-2	Fitting, 90°	1
21	ES 40022-6	Fitting ST	1
22	ES 41019-2	Tee	1 
23	ES 42036-2	Swivel Nut Connector	1 
24	ES41019-7	Union, Tee	1 

* Recommended Spare Part

Note 1: Total amount required/installation - order actual length required for individual location replacement.



Fig. E-16B is for AFT Evaporators with 1 Expansion Valves and 1 Suction Tubes (JBS 2005-1)



Parts Required for A/C with Fwd Evaporators.

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
PLUMBING INSTALLATIONS (cont'd)

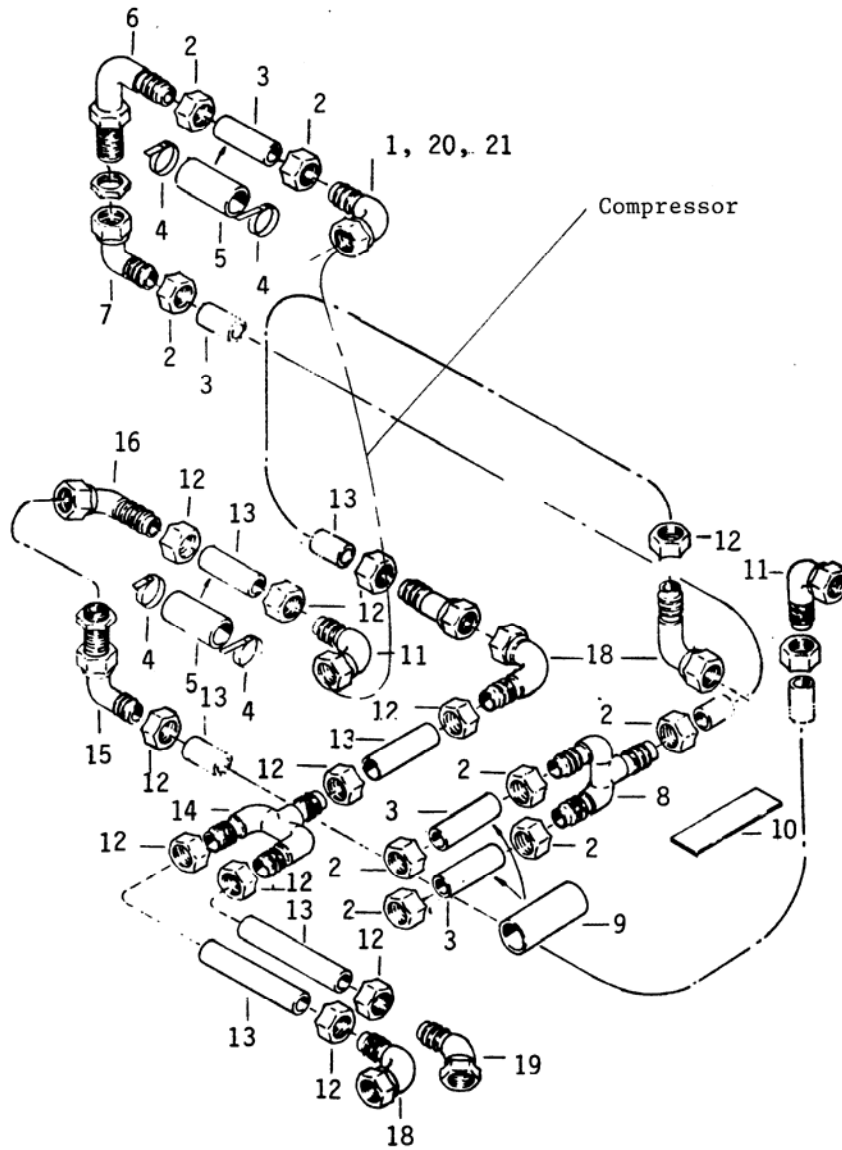


Fig. E-17

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
PLUMBING INSTALLATIONS (cont'd)

Figure Index No.	Part Number	Description	Units Per Install.
E-17	206-0750-4	Plumbing Installation	Ref.
1	ES40027-6	Elbow, 90° (Note 2)	1
2	ES40020-5 *	Socket (Note 1)	8
3	ES48145-4 *	Hose (Note 1)	72"
4	ES30072-1 *	Clamp (Note 1)	4
5	ES02126-2 *	Firesleeve (Note 1)	48"
6	ES40028-4	Bulkhead fitting	1
7	ES40038-1	Elbow, 90°	1
8	ES41023-4	"Y" Fitting	1
9	ES02162-3 *	Tube, Insulating (Note 1)	72"
10	ES06022-1 *	Tape, Insulation (Note 1)	72"
11	ES40025-2	Elbow, 90°	2
12	ES40020-2 *	Socket (Note 1)	12
13	ES48145-2 *	Hose (Note 1)	180"
14	ES41023-2	"Y" Fitting	1
15	ES40028-2	Bulkhead Fitting	1
16	ES40034-2	Fitting, 45°	1
17	ES40022-4	Fitting, Straight	1
18	ES40027-4	Elbow, 90°	3
19	ES40024-1	Fitting, 45°	1
20	ES41046-3	Elbow, 90° (Note 3)	1
21	ES41024-1	Return 140° (Note 3)	1
*Recommended Spare Part			
Note 1: Total amount required/installation - order actual length required for individual location replacement.			
Note 2: Used on 206B S/N 162013 thru S/N 162052.			
Note 3: Used on 206B S/N 162053 and subsequent.			

E-27 E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

PLUMBING INSTALLATIONS (cont'd)

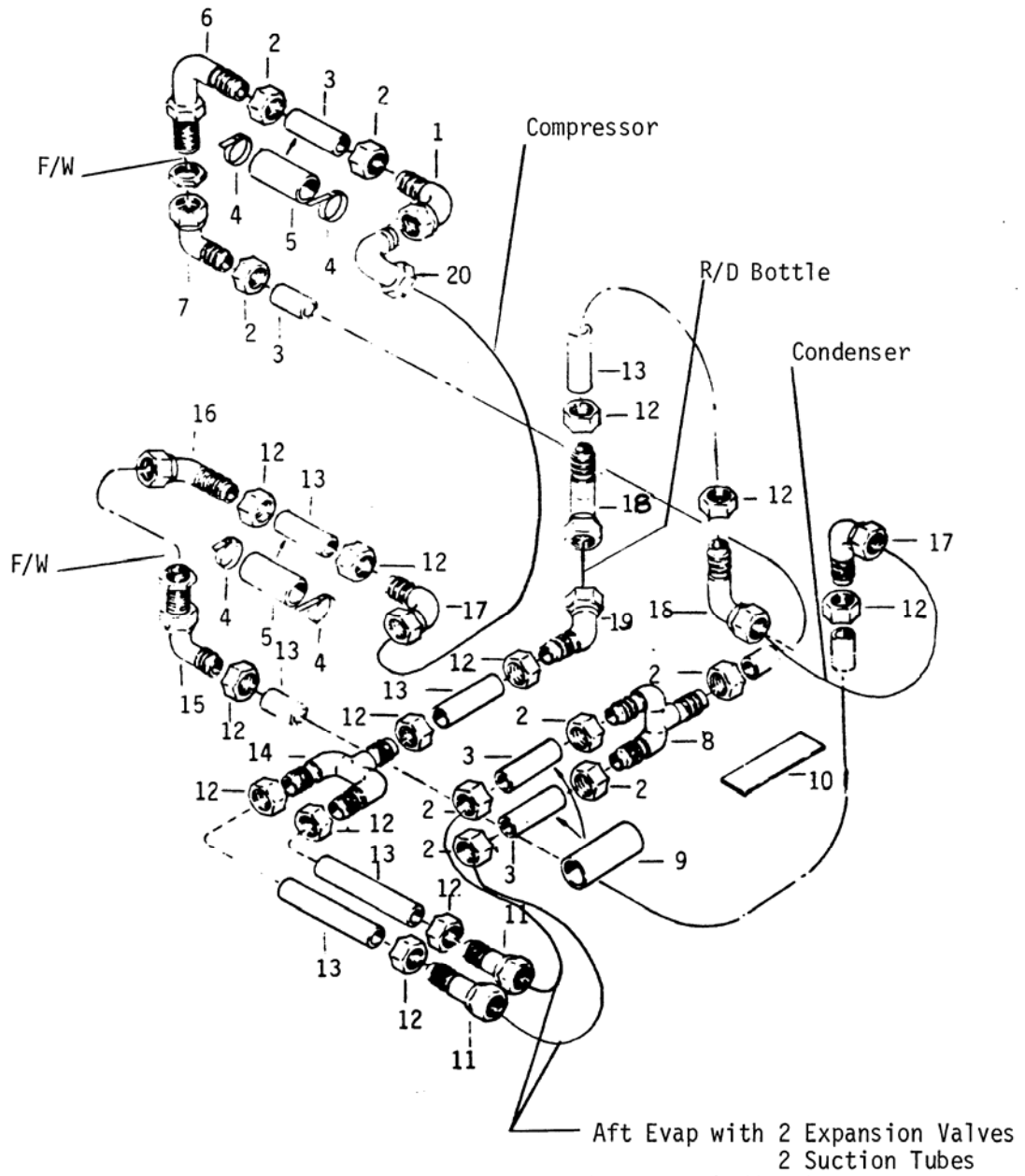


Fig. E-18

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

PLUMBING INSTALLATIONS

Figure Index No.	Part Number	Description	Units Per Install.
E-18	206-0750-5	Plumbing Installation	Ref.
1	ES 41024-1	Elbow, 140°	1
2	ES 40020-4 *	Socket (Note 1)	8
3	ES 48145-4 *	Hose (Note 1)	90"
4	ES 30072-1 *	Clamp (Note 1)	4
5	ES 02126-2 *	Firesleeve (Note 1)	48"
6	ES 40028-4	Bulkhead Fitting	1
7	ES 40038-1	Elbow, 90°	1
8	ES 41023-4	"Y" Fitting	1
9	ES 02162-3 *	Tube, Insulating (Note 1)	72"
10	ES 06022-1 *	Tape, Insulation (Note 1)	72"
11	ES 40022-4	Straight Fitting	2
12	ES 40020-2 *	Socket (Note 1)	12
13	ES 48145-2 *	Hose (Note 1)	90"
14	ES 41023-2	"Y" Fitting	1
15	ES 40028-2	Bulkhead Fitting	1
16	ES 40034-2	Fitting, 45°	1
17	ES 40025-2	Elbow, 90°	2
18	ES 40027-4	Elbow, 90°	1
19	ES 40024-1	Fitting, 45°	2
20	ES 41046-3	Elbow, 90°	1

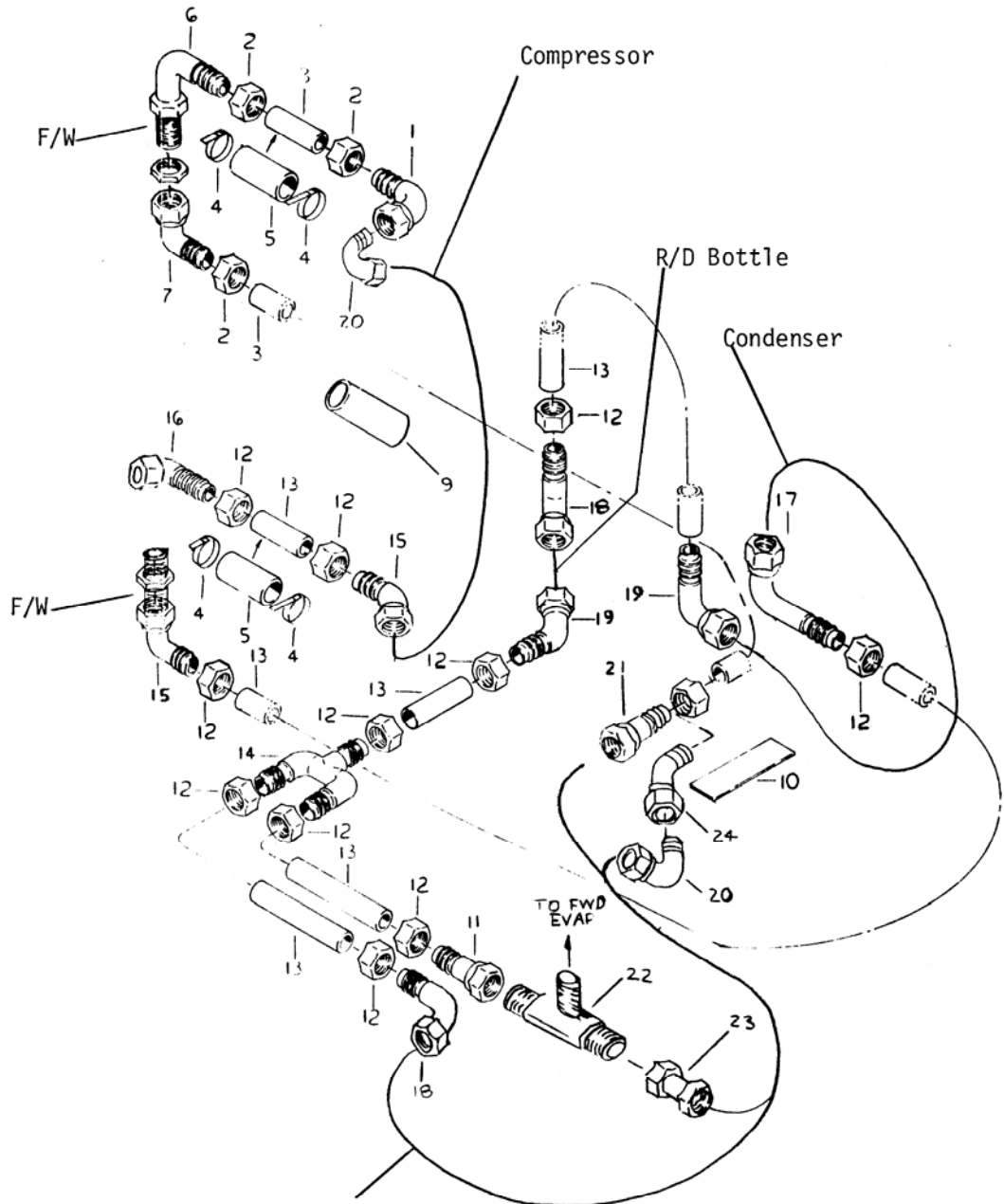
* Recommended Spare Part

Note 1: Total amount required/installation - order actual length required for individual location replacement.



Fig. E-18 is for Aft Evaporators with 2 Expansion Valve and 2 Suction Tubes

E-28A E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
PLUMBING INSTALLATIONS (cont'd)







Aft Evaporators with 2 Expansion Valve and Common Suction Manifold (Accommodates a Forward Evap.).

Fig. E-18A

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)


PLUMBING INSTALLATIONS

Figure Index No.	Part Number	Description	Units Per Install.
E-18A 	206-0750-5	Plumbing Installation	Ref.
1	ES 41024-1	Elbow, 140°	1
2	ES 40020-4 *	Socket (Note 1)	4
3	ES 48145-4 *	Hose (Note 1)	90"
4	ES 30072-1 *	Clamp (Note 1)	4
5	ES 02126-2 *	Firesleeve (Note 1)	48"
6	ES 40028-4	Bulkhead Fitting	1
7	ES 40038-1	Elbow, 90°	1
9	ES 02162-3 *	Tube, Insulating (Note 1)	72"
10	ES 06022-1 *	Tape, Insulation (Note 1)	72"
11	ES 40022-4	Straight Fitting	1
12	ES 40020-2 *	Socket (Note 1)	12
13	ES 48145-2 *	Hose (Note 1)	90"
14	ES 41023-2	"Y" Fitting	1
15	ES 40028-2	Bulkhead Fitting	1
16	ES 40034-2	Fitting, 45°	1
17	ES 40025-2	Elbow, 90°	2
18	ES 40027-4	Elbow, 90°	2
19	ES 40024-1	Fitting, 45°	2
20	ES 41046-3	Elbow, 90°	2
21	ES 40022-6	Fitting, Str (206L models)	1
22	ES 41019-2	Tee	1 
23	ES 42036-2	Swivel Nut Connector	1 
24	ES 40027-6	Fitting 90° (206B models)	1 

* Recommended Spare Part

Note: Total amount required/installation - order actual length required for individual location replacement.

 Fig. E-18A is for Aft Evaporators with 2 Expansion Valve and Common Suction Manifold

 Parts required for Fwd Evap Interface.

E-28C E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
PLUMBING INSTALLATIONS (cont'd)

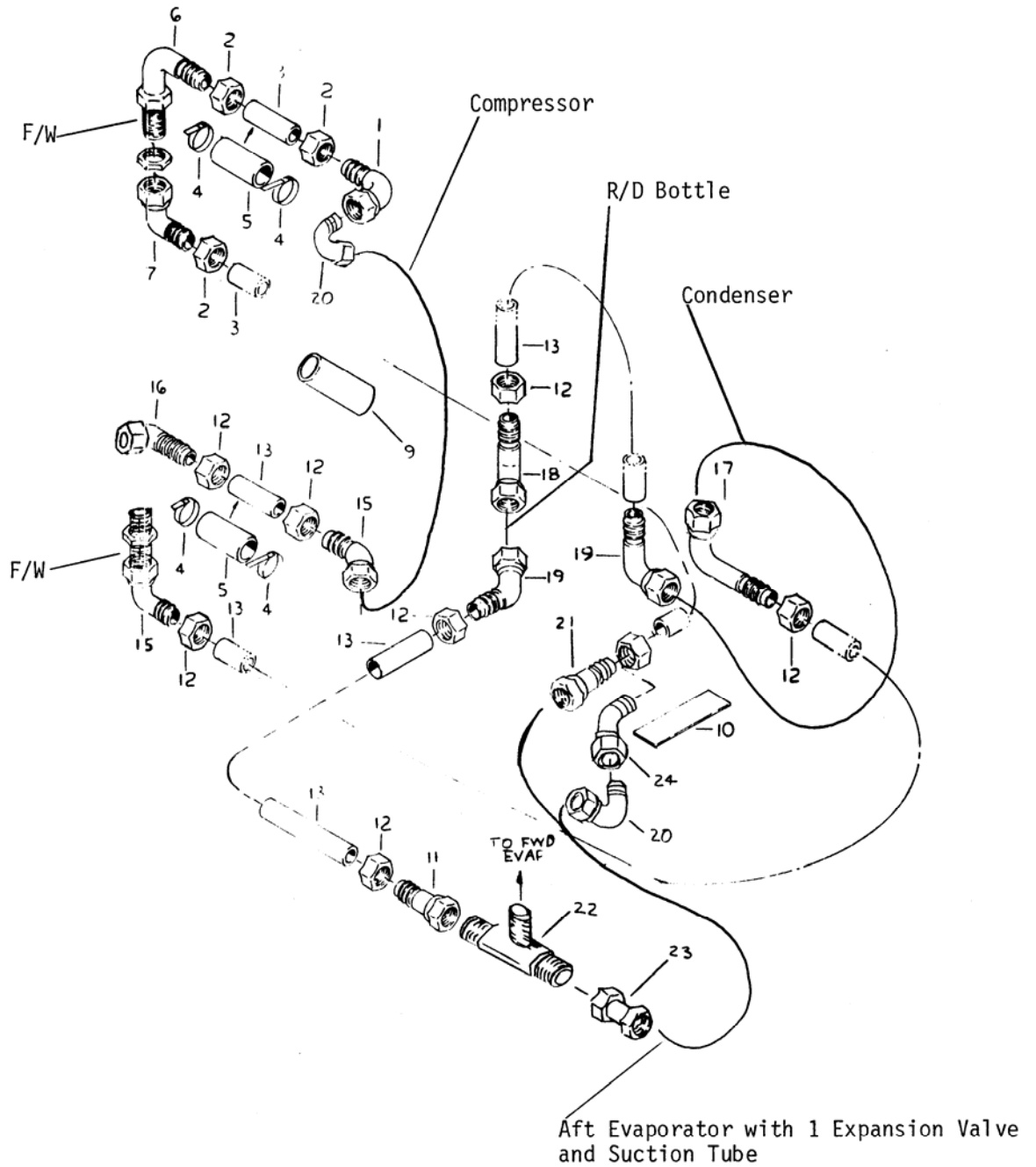



Fig. E - 18B

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)

PLUMBING INSTALLATIONS

Figure Index No.	Part Number	Description	Units Per Install.
E-18 B 	206-0750-5	Plumbing Installation	Ref.
1	ES 41024-1	Elbow, 140°	1
2	ES 40020-4 *	Socket (Note 1)	4
3	ES 48145-4 *	Hose (Note 1)	90"
4	ES 30072-1 *	Clamp (Note 1)	4
5	ES 02126-2 *	Firesleeve (Note 1)	48"
6	ES 40028-4	Bulkhead Fitting	1
7	ES 40038-1	Elbow, 90°	1
9	ES 02162-3 *	Tube, Insulating (Note 1)	72"
10	ES 06022-1 *	Tape, Insulation (Note 1)	72"
11	ES 40022-4	Straight Fitting	1
12	ES 40020-2 *	Socket (Note 1)	8
13	ES 48145-2 *	Hose (Note 1)	90"
15	ES 40028-2	Bulkhead Fitting	1
16	ES 40034-2	Fitting, 45°	1
17	ES 40025-2	Elbow, 90°	2
18	ES 40027-4	Elbow, 90°	2
19	ES 40024-1	Fitting, 45°	2
20	ES 41046-3	Elbow, 90°	2
21	ES 40022-6	Fitting ST.(206L model)	1
22	ES 41019-2	Tee	1 3
23	ES 42036-2	Swivel Nut Connector	1 3
24	ES 40027-6	Fitting 90° (206 B models)	1

* Recommended Spare Part

Note 1: Total amount required/installation - order actual length required for individual location requirement.



Fig. E-18B is for Aft Evaporator with 1 Expansion Valve and Suction Tube.



Parts required for Fwd Evap Interface.

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (Cont'd.)

BLEED AIR HEATER INSTALLATIONS.

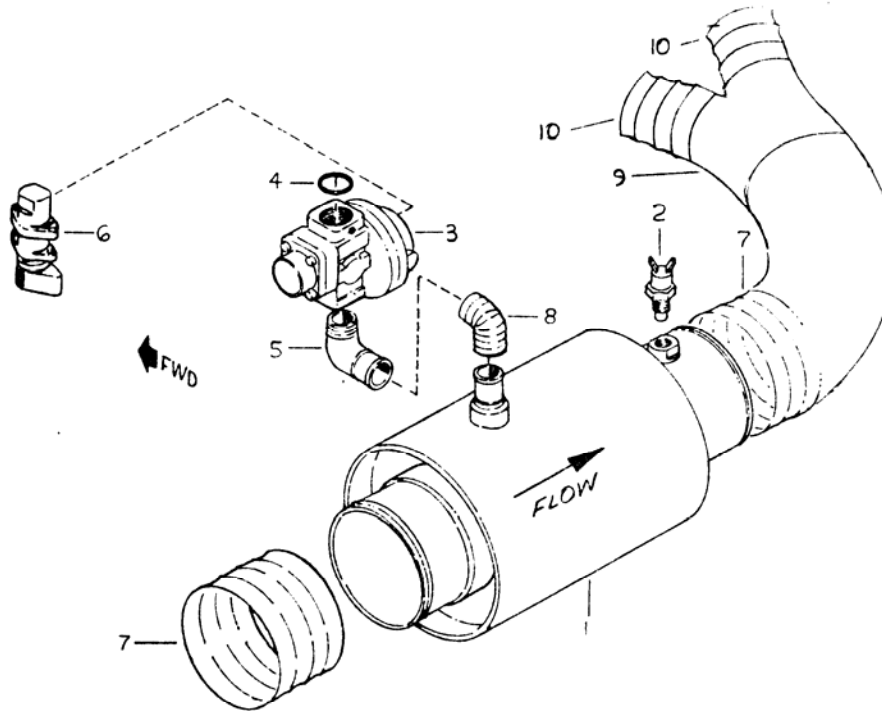


FIGURE E-19

Figure Index No.	Part Number	Descriptions	Units Per Install.
E-19	206-0801, 0802, 0804	Heater Inst'l.	Ref.
1	206-0851-6	Silencer Assy. (Note 1)	1
2	ES 52127-1 *	Temp. Sensor	1
3	ES 26053-1	Valve	1
4	ES 49002-18 *	O-Ring, M83248/1-910	1
5	AN 842-16D	Elbow	1
6	ES 26051-1	Valve	1
7	ES 70010-2	Duct (4.0 Dia.)	NOTE: 2
8	ES 70012-1 *	Duct, Extreme Temp.	1
9	206-0651-1	Y-Adapter	1
10	ES 70010-1	Duct (2.5 Dia.)	NOTE: 2
NOT SHOWN	ES 49002-5 *	O-Ring, M83248/1-908, All Connections in Engine Compartment for: 206A, B Models.	3
NOT SHOWN	ES 49002-14 *	FOR: 206L Models	5
NOT SHOWN	ES 49002-14 *	O-Ring, M83248/1-903, (Particle Separator Plug 206 A, B & L).	1
NOT SHOWN	ES 49003-6 *	O-Ring, M83248/1-904, (Particle Separator Plug 206 L1 & L3).	1

* RECOMMENDED SPARE PART.

NOTE 1: INCLUDES ES52127-1 TEMP. SENSOR.

NOTE 2: ORDER LENGTH REQUIRED.

E-29A

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E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
FORWARD EVAPORATOR INSTALLATION

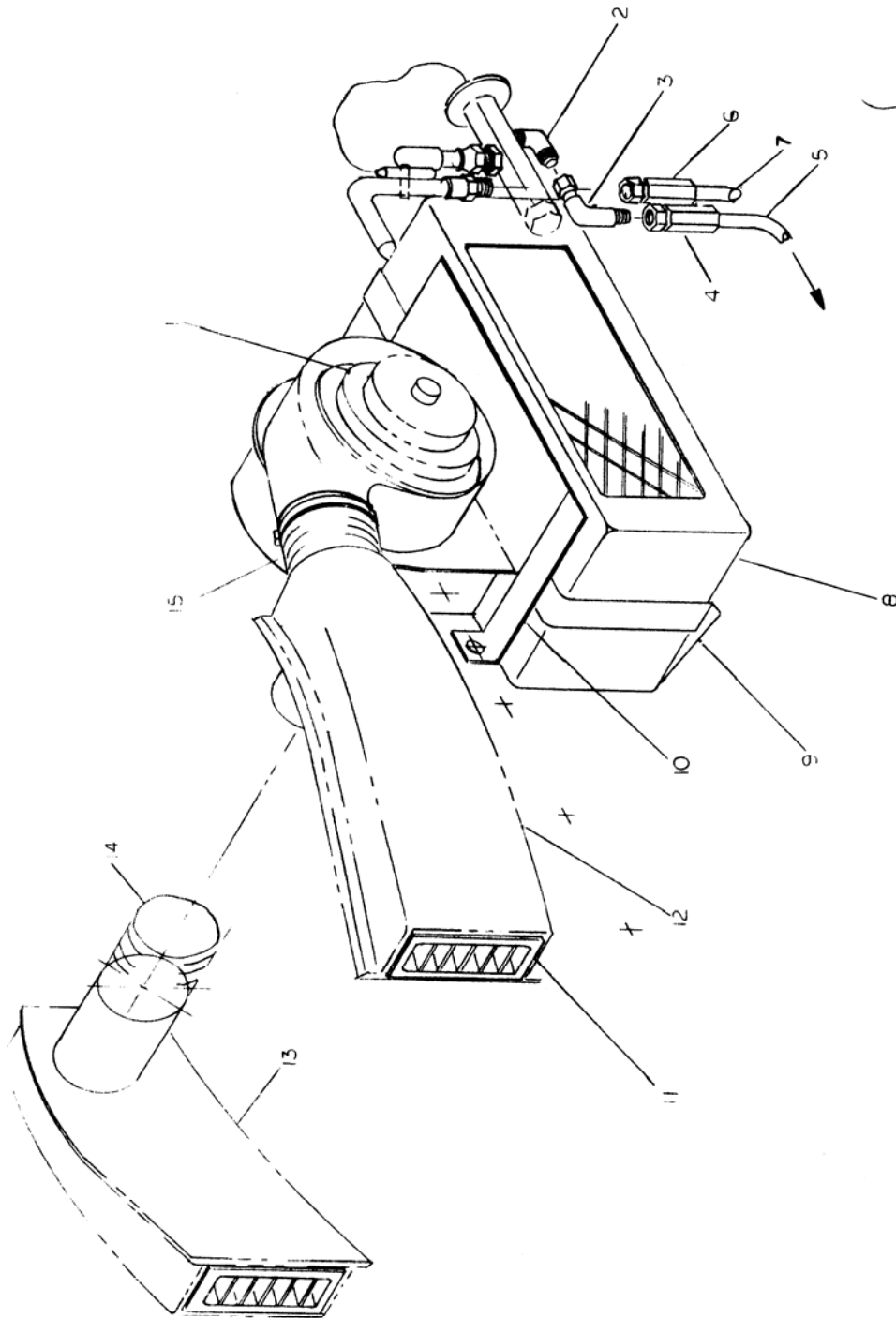


FIG. E-20

E. ILLUSTRATED PARTS CATALOG AND RECOMMENDED SPARES (cont'd)
 PLUMBING INSTALLATIONS

Figure Index No.	Part Number	Description	Units Per Install.
E-20	206-0205-1,0206-1	Fwd Evap Inst'l	Ref.
1	ES61060-2	Motor	1
2	ES 26101-7	Expansion Valve	1
3	ES 41046-1	Elbow	1
4	ES 40048-1	Fitting	2
5	ES 48144-1	Hose	As Req'd
6	ES 40048-3	Fitting	2
7	ES 48144-2	Hose	As Req'd
8	JBS 2003-1	Evap/Blower Assy	1
9	206-1283-1	Bracket	1
10	206-1284-1	Bracket	1
11	ES 72037-2	Louver	2
12	206-1697-1	Duct Assy	1
13	206-1670-1	Duct Assy	1
14	ES 70009-3	Flex Duct	As Req'd
15	ES 70009-2	Flex Duct	As Req'd

* Recommended Spare Part

Note 1: Total amount required/installation - order actual length required for individual location requirement.

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AVAILABLE SERVICE KITS.

Service Bulletin No.	Subject/Title	Effectivity	Reason/Comments
SB 061	Condensate buildup on ducts.	206B after S/N3567 & ECS Installations. 206-L3.	This SB provides procedures to insulate air ducting to preclude condensate formation.
SB 062A	Isolated compressor Installation for aft mounted compressors.	All 206B series ECS installations with aft mounted compressors.	Add rubber bushings to compressor mount to improve isolation.
SB 064	Removal of the ECS Booster Blower (s).	All 206 Series ECS installations with forward booster blowers.	Consists of a forward headliner and modification Kit which allows removal of the forward blower, and results in a performance improvement.
SB 065	Compressor Drive Installation.	206B Series.	To move the compressor installation from the forward to the aft mounted location, to permit installation of a standby generator.
SB 066	Compressor Drive Installation.	206L Series.	To move the compressor installation from the forward to the aft mounted location, to permit installation of a standby generator.
SB 081	Forward Evaporator Installation.	206-0100-7 & -15 ECS (206B) Non IFR equipped A/C.	To ADD a Forward mounted Evaporator with Air outlet ducts on each side of Instrument Panels.
SB 082	Forward Evaporator Installation.	206-0100-9 & -16 ECS Kits (206L3) Non IFR equipped A/C.	To ADD a Forward mounted Evaporator with Air outlet ducts on each side of Instrument Panel.
SB 083	Return Air Ducting	All ECS Kits.	Instructions on Duct Replacement Techniques.

F. Available Service Bulletins For
Keith Products, L.P. ECS

Discussion

The service bulletins which are listed in this section are available from Keith Products, L.P.

Most of these bulletins define a modification to the ECS and the kit which specifies the hardware required to accomplish the modification. These kits are also available through Keith Products, L.P.